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[2] Baird, H. W., III: A comparison of Meprospan (sustained action meprobamate capsule) with other tranquilizing and relaxing agents in children. Submitted for publication, 1958.

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Rare Fungus Disease Found in Florida

Two cases of a rare mole-like skin disease of the hand have occurred in Florida, according to three Florida scientists.

The disease, tinea nigra palmaris, is caused by a fungus and usually occurs on the palms.

Only five other cases of tinea nigra palmaris have been reported in the United States (one in Florida and four in Texas), the scientists said in the May 16 issue of the *Journal of the American Medical Association.* The disease usually occurs in South and Central America and the West Indies.

The occurrence of two more cases in widely separated parts of Florida suggests that the disease may be more common than generally thought, they said.

The lesions of tinea nigra palmaris are brown or black, appearing like an India ink or silver nitrate stain. They are neither elevated nor scaly as moles sometimes are. They cause no real discomfort and respond readily to treatment with agents, such as salicylic acid or benzoic acid, which cause a peeling of the horny layer of the skin.

The authors are Drs. J. Graham Smith Jr. and Wiley M. Sams, and Frank J. Roth Jr., Ph.D., Miami.

Texas Physicians Report New Heart Operation

The successful removal during "open heart" surgery of a ventricular aneurysm following a heart attack in a 50-year-old man was recently reported by four Texas physicians.

During the operation, the heart was opened after the blood had been shunted into a bypass through the use of a mechanical heart-lung machine. This helped prevent complications that might have arisen if the heart were beating during the surgery, Dr. Denton A. Cooley and associates wrote in the May 31 issue of the *Journal of the American Medical Association.*

Ventricular aneurysms occur in from 10 to 38 per cent (depending on definition of the term) of persons who survive myocardial infarctions. The presence of the sac on the ventricle wall interferes with the function of the chamber and may sharply reduce the heart's output. There is also the danger of the aneurysm's rupturing.

In the case reported, while the blood was shunted completely around the heart for 11 minutes, the sac was removed and the ventricle wall repaired.

The patient's early course after the operation was complicated by fever and mental disorientation. After the third day, however, his recovery was uneventful and he was dismissed from the hospital, walking, 18 days after operation.

In the four-and-a-half months since the operation he has continued to improve and is progressively increasing his physical activity. He has noted a "significant improvement" over his condition before the operation, the physicians said.

In an addendum to the report, the authors wrote that a 48-year-old man has also successfully undergone the operation.

The authors, in addition to Dr. Cooley, are Drs. Harold A. Collins, George C. Morris Jr., and Don W. Chapman, all of the Cora and Webb Mading department of surgery, Baylor University College of Medicine, Houston.

Anemia in Infants

The number of infants and small children who develop iron deficiency anemia continues to be a "shocking public health problem." However, the blood disorder can be prevented if the susceptible infants are recognized and given extra iron, Dr. Calvin W. Woodruff, Nashville, said in the June 7 issue of the *Journal of the American Medical Association.* Iron is necessary for the production of red blood cells.

During a three-year period, he studied 272 anemic children under the age of five years at a clinic associated with Vanderbilt University School of Medicine.

The most significant factors in predisposing a child to anemia were low birth weight, high birth order, twinning and masculinity. A diet poor in iron did not appear to cause anemia, since these children ate the same diet as did other children who did not become anemic, Dr. Woodruff said.

Prematurity or low birth weight was the most common factor, he said, adding that premature infants tend to grow faster during the first year of life than do full-term infants, thus requiring larger amounts of iron. Boys also grow more rapidly during the first year of life than do girls.

Twenty-six of the infants were twins. Both members of nine pairs were anemic; only one member was anemic in eight instances. Twenty of the twins were premature on the basis of birth weight.

The study also showed that the incidence of anemia in white infants increased as birth order increased, reaching a peak with the fourth-born infant. In Negro infants, the peak was for second-born infants.

There is also a factor of deficient iron stores at birth, resulting from blood loss during delivery or because the mother is anemic, stated Dr. Woodruff.

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1. Weinberg, A., and Werner, W. E. F.: Am. Pract. & Digest Treat. *6*:580 (April) 1955.
2. Codling, J. W., and Lowden, R. J.: Northwest Med. *57*:331 (March) 1958.

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The FTC orders specify that advertising claims for relief of minor aches are permitted, but representations that the oils, salves, etc., have any beneficial effect below the skin surface are forbidden.

—*Washington Report*

Persons over 65 years old, persons with annual family incomes of less than $2,000, widowed and divorced persons, and persons who last moved to California before 1946 appear to have a wide range of health problems.

—*Health in California*

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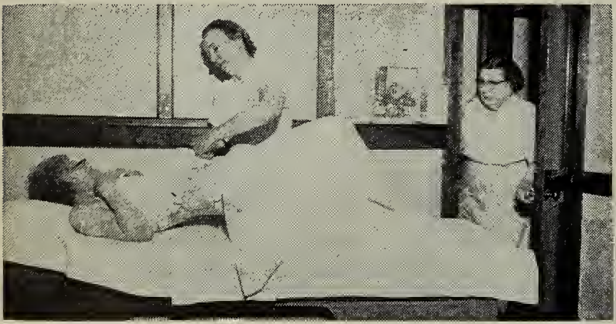

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Persons Should Know Own "Emotional Boundaries"

A person who knows his own "emotional boundaries" functions usefully, happily, and gracefully, a Cincinnati physician has stated.

In dealing with other persons' emotional problems, an individual must know "where he leaves off and where someone else begins," Dr. Charles D. Aring said in the May 24 issue of the *Journal of the American Medical Association.*

While he was aiming his remarks at doctors and others in the "interviewing professions," his advice is applicable to people who just listen to friends and relatives.

Dr. Aring noted that one of the most difficult tasks put upon man is that of learning how to listen to another's problems without involving himself emotionally.

People are early conditioned to react in certain ways to other people's emotions. But reacting without conscious consideration for the person's current situation will not help him solve the problem, and may even complicate it because still another person's emotions become involved.

The goal is to learn how to listen and help, but on the basis of a conscious awareness of the situation and not on a reflexive reaction. It might be said that the goal is empathy instead of sympathy.

The statement that "one cannot fully appreciate the problems of others unless he can put himself in another's place" is true, but one has to remember his own emotional boundaries. He should be empathetic rather than sympathetic.

When one is sympathetic, he does not remember his own boundaries, for sympathy means the act or capacity of entering into or sharing the feelings of another and becoming similarly affected.

"Becoming similarly affected" may be the act that completely complicates the situation. It does not allow for rational and intellectual analysis and advice.

But when one is empathetic, there is the possibility of helping to solve the problem. Empathy means putting oneself in another's place and understanding the situation but always maintaining an awareness of one's separateness.

One has one's own feelings and relationships and works to understand them. They can be useful in understanding similar feelings and relationships in others.

Thus in dealing with other persons, an individual must understand and appreciate their problems. But he must also understand that this is quite different from joining in the problems, and, in so doing, perhaps adding further complications to the situation.

Dr. Aring is in the Department of Neurology at the University of Cincinnati College of Medicine and the Cincinnati General Hospital.

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Editor Appointed for American Medical Association Newspaper

The American Medical Association has announced the appointment of an editor for its new publication *"The A.M.A. News."*

Jim Reed, presently executive editor of the *Topeka Daily Capital,* assumed his new duties on June 2.

To be published every two weeks by the association, the 16 page newspaper will feature nonscientific news of special interest to the medical profession.

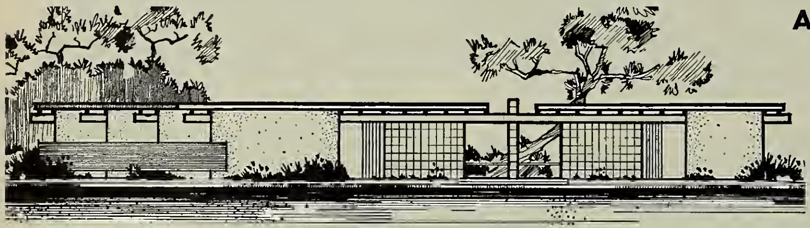
The 42-year-old Mr. Reed is an Air Force veteran of World War II who attended Washburn University in Topeka and Colorado State College of Education, Greeley, Colorado. He is married and the father of two sons, ages 10 and 6.

For the past eight years Mr. Reed has been associated with the *Topeka Capital.* Prior to that time he served on the editorial staffs of several midwestern papers.

During four of the past six years the *Topeka Daily Capital* has received the Ethel Perrill memorial award and has been cited as "the newspaper making the most significant contribution to the cause of mental health." The *Capital* is the only newspaper to receive the Kansas state department of social welfare award for meritorious service.

Mr. Reed himself was honored by the Kansas Bar Association in 1957 "for the most constructive contribution to the science of jurisprudence and the administration of justice by a Kansas newspaperman." He has also worked actively with the Kansas Medical Society in developing a code to promote greater and smoother flow of news between the medical profession and various news media.

Mr. Reed is a member of the American Society of Newspaper Editors, and Sigma Delta Chi, professional journalistic fraternity, and is a trustee of the William Allen White Foundation.



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National Health Service Reports on Injuries In U. S. Home Accidents Account for 40%

About 25 million persons in the U. S. were hurt seriously enough in the second half of last year to require medical attention or to limit activities for at least a day. The latest report of the National Health Survey blamed home accidents for 40.3 per cent of the total; work accidents, 16.7 per cent; motor accidents, 9.8 per cent and others, including injuries from violence, 33.1 per cent. Of the total, 14.1 million were males; 14.9 million were urban residents; 7.1 million lived in rural non-farm areas and 3 million on farms. On an average, about 1,175,000 persons every day were limited because of injuries, and of these, 305,000 were in bed or in a hospital.

—*Washington Letter*

Approximately 13 per cent of the state's families have incomes of less than $2,000 a year, 43 per cent have incomes of less than $5,000, and 43 per cent have incomes of more than $5,000.

—*Health in California*

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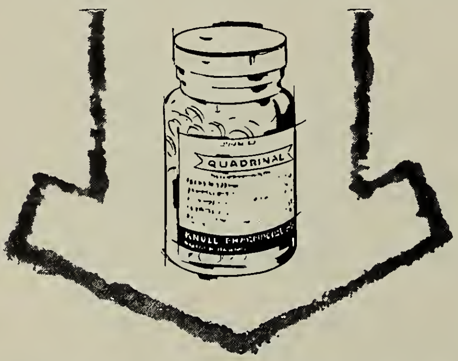

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The Present Status of Tranquilizing Drugs

LEO E. HOLLISTER, *M.D.*, Palo Alto

• Tranquilizing drugs may be classified into four groups, according to chemical structure: (1) Phenothiazine derivatives, (2) Rauwolfia alkaloids, (3) substituted propanediols or butanediols, and (4) diphenylmethane derivatives.

The distinguishing features of tranquilizing drugs in contrast to conventional sedatives is that they calm without producing sleep and that their site of action in the central nervous system is predominantly subcortical. The principal sites of action are important regulating centers of the brain: thalamus, hypothalamus, reticular activating system and portions of the limbic system.

Phenothiazine derivatives, besides being the most effective tranquilizers for treating severe emotional disorders, are also clinically useful for potentiating other analgesic or anesthetic drugs and for controlling vomiting. This rapidly growing group of drugs is of major importance in present-day psychopharmacologic therapy. Newer derivatives, especially of the piperazine type, appear to be highly effective as tranquilizers in low doses. They also produce fewer major complications from treatment. Rauwolfia alkaloids have decreased in importance in psychiatric use, but are still the basic drugs for treating hypertension. The substituted propanediols or butanediols are generally used as mild sedatives for less serious emotional disorders. The diphenylmethane derivatives, while chemically related, have a variety of pharmacologic actions which include sedation, stimulation, antihistaminic and anticholinergic effects.

The ultimate role of these agents in the treatment of major emotional disorders, such as schizophrenic reactions, still is uncertain. However, the impetus these drugs have given to improved treatment of psychotic patients in mental hospitals has unquestionably been beneficial. The intensive attempts to determine their modes of action will very likely yield important advances in the understanding of possible neurophysiologic bases for mental illness.

THE TERM "tranquilizers" has been given to a group of drugs with the property of sedating without impairing consciousness. These drugs are now second only to the broad-spectrum antibiotics in dollar sales and number of prescriptions written. They are used in almost every branch of medical practice. Their introduction has been heralded as a milestone in psychiatric medicine and has revolutionized the treatment programs of mental hospitals. The number of these drugs is increasing at a rapid rate. To make matters more confusing, the same compound may appear under a number of different trade-names.*

One can attempt to classify these agents on the basis of clinical indications or the predominant pharmacologic action. However, clinical indications may change with the passage of time and many of these drugs have a variety of pharmacologic actions, the relative importance of which is still not settled. Hence, the best way to classify these drugs seems to be on the basis of chemical structure.

Most tranquilizing drugs fall into one of four general groups, according to chemical structure: (1)

From the Veterans Administration Hospital, Palo Alto.
Submitted April 21, 1958.

*See notes on trade-names at foot of page 2.

Phenothiazine derivatives, (2) Rauwolfia alkaloids, (3) substituted propane- or butanediols, and (4) diphenylmethane derivatives. For the most part, drugs within each group have similar pharmacologic actions, clinical indications and disadvantages.

Phenothiazine Derivatives

Phenothiazine derivatives are currently the most widely used and of greatest research interest. The chemical structures of several tranquilizing phenothiazines currently on the market are shown in Chart 1.

The basis of this group of drugs is the phenothiazine nucleus. This structure may be substituted at two places, the carbon atom at the 2-position or the nitrogen atom at the 10-position. As might be expected, many compounds have been derived from such chemical manipulation. A halogen, either chlorine or a trifluoromethyl group, is frequently substituted at the 2-position. However, methoxy, methylmercapto and acetyl groups, among others, have been placed at the same position or others (the 3-position, for example). The "tail" of the compound, placed at the 10-position, may be either aliphatic (straight-chain) or aromatic (containing a ring structure). Chlorpromazine, promazine, and triflupromazine have aliphatic (dimethylaminopropyl) "tails." Aromatic "tails" include the piperidine ring (connected to the phenothiazine nucleus by a methyl group as in mepazine) or a piperazine ring (connected by a propyl group as in prochlorperazine, perphenazine, and thiopropazote). The addition of aromatic "tails," especially those with the piperazine ring, increases by several-fold the potency of action on the central nervous system. In any case, virtually all phenothiazine derivatives with tranquilizing properties have the nitrogen of the phenothiazine nucleus separated from that of the "tail" by three carbon atoms.

An amazing diversity of pharmacologic actions is exhibited by the phenothiazine derivatives. The sedative effects, so different from those of conventional sedatives as to warrant the use of the epithet "tranquilizing," are well known. Unlike conventional sedatives, chlorpromazine and its congeners calm the excited or anxious patient without impairment of motor function or enforcing sleep. The loci of action in the brain are chiefly subcortical, probably accounting for the different kind of sedation. Chlorpromazine stimulates the amygdaloid complex, a portion of the limbic system. Such stimulation might interfere with the function of this system as well as depress the hypothalamus. The drug also depresses the function of the reticular activating system, a kind of monitor which regulates the intensity with which stimuli are appreciated and the emotional reactions evoked.[13] These effects on these three areas, which are of major importance as neural structures concerned with emotional responses, could account for the tranquilization produced by the drug. Much of the emotional response to external or internal stimuli would be diminished by such actions.

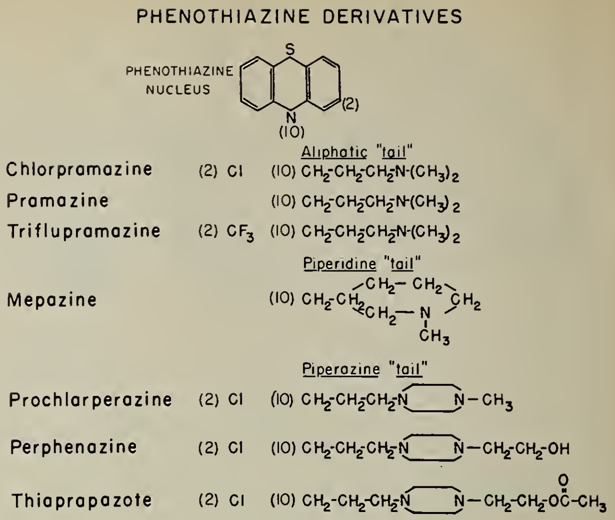
PHENOTHIAZINE DERIVATIVES
PHENOTHIAZINE NUCLEUS
S
N
(10)
(2)
Aliphatic "tail"
Chlorpramazine (2) Cl (10) CH2-CH2-CH2-N-(CH3)2
Pramazine (10) CH2-CH2-CH2-N-(CH3)2
Triflupramazine (2) CF3 (10) CH2-CH2-CH2-N-(CH3)2
Piperidine "tail"
Mepazine (10) CH2-CH2 CH2 CH2 CH2 CH2 N CH3
Piperazine "tail"
Prochlarperazine (2) Cl (10) CH2-CH2-CH2-N N-CH3
Perphenazine (2) Cl (10) CH2-CH2-CH2-N N-CH2-CH2-OH
Thiaprapazote (2) Cl (10) CH2-CH2-CH2-N N-CH2-CH2-OC-CH3
O

Chart 1

Originally, chlorpromazine was developed to potentiate analgesic and anesthetic agents, an effect which it has shown to a moderate degree. This effect has been used clinically in surgical anesthesia and in treating painful states such as metastatic malignant disease.[25] Antiemetic effects of considerable degree have made some phenothiazine derivatives the drugs of choice in treating nausea.[9,21] The medullary chemoreceptor trigger zone for vomiting is depressed. A similar action may account for the usefulness of this drug in treating hiccough. In addition to the clinically useful effects, phenothiazine derivatives have many which are chiefly of experimental interest, ranging from adrenergic blockade, the production of hypothermia and metabolic effects to the production of an interesting variety of extrapyramidal syndromes.

Chlorpromazine, the first tranquilizing phenothiazine derivative, is one of the most intensively studied of all drugs. Virtually every psychiatric syndrome has been treated, usually with benefit, by this drug.[5,10,16] Particularly important has been the

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Besides the generic names used in this paper, most of these drugs also have trade-names, some having multiple names. The best-known trade-names of each compound are listed below:

Phenothiazine derivatives: Chlorpromazine (Thorazine), promazine (Sparine), triflupromazine (Vesprin), mepazine (Pacatal), prochlorperazine (Compazine), perphenazine (Trilafon), thiopropazote (Dartal).

Rauwolfia alkaloids: Whole root extracts (Raudixin), alseroxylon fraction (Rauwiloid), reserpine (Serpasil, Sandril, Reserpoid, Serpiloid), rescinnamine (Moderil), deserpidine (Harmonyl).

Substituted propane- or butanediols: Meprobamate (Miltown, Equanil), phenaglycodol (Ultran), methocarbamol (Robaxin), 2-ethylcrotonylurea (Nostyn).

Diphenylmethane derivatives: Hydroxyzine (Atarax), benactyzine (Suavatil), azacyclonol (Frenquel), pipradrol (Meratran), isopropamide (Darbid), adiphenine (Trasentine).

ameliorating effect it has on schizophrenic reactions, the most common, most disabling and most baffling of psychiatric disorders. Chlorpromazine is now the standard against which all succeeding psychotherapeutic drugs must be measured. On the basis of studies currently available, it appears that some of the other phenothiazines, especially the piperazine derivatives or the fluorinated compounds, have tranquilizing properties equal to or superior to chlorpromazine.[2,4,11] Some, like prochlorperazine, may be better antiemetic agents. However, the aliphatic compounds (chlorpromazine, promazine, and triflupromazine) still are more useful in potentiating other drugs.

Chlorpromazine may bring about two serious complications, jaundice and agranulocytosis.[15] Neither is frequent, jaundice occurring in fewer than 2 per cent of patients treated for more than a week, and agranulocytosis being a comparative rarity. Although agranulocytosis has occurred with promazine, triflupromazine and mepazine, this complication has not yet been reported from the piperazine derivatives. Jaundice, too, appears to be less likely to occur with the piperazine derivatives. It has been reported in association with mepazine therapy and from promazine in patients previously treated with chlorpromazine. Adrenergic blocking effects, which have led to severe hypotensive crises in some patients treated with chlorpromazine, appear to be less with the newer drugs. On the other hand, the piperazine derivatives produce more severe extrapyramidal signs. In addition to the usual triad of muscle rigidity, resting tremor and loss of associated movements, states of uncontrolled motor activity, oculogyric crises and spasms of the neck, tongue and pharyngeal muscles are frequently encountered. Whether or not the increased frequency of extrapyramidal effects is positively correlated with increased amelioration of schizophrenic symptoms is still a moot point. These manifestations do not usually occur except in association with the high doses used in psychiatric treatment.

Rauwolfia Alkaloids

By a curious coincidence, the ancient plant extracts, the Rauwolfia alkaloids, were introduced to Western medicine almost simultaneously with the increased interest in phenothiazine derivatives. Originally, extracts of Rauwolfia serpentina were studied for their effects on arterial hypertension. Only an incidental observation led to their use as tranquilizing agents.[28]

Among nearly three dozen alkaloids found in the plant, three pure alkaloids are currently in clinical use. The structures of reserpine, rescinnamine and deserpidine are shown in Chart 2. The chemical differences between these alkaloids are slight, as are the pharmacologic differences. The pharmacologic actions of whole root extracts or the alseroxylon fraction of Rauwolfia (containing all the alkaloids) are so similar to those of the pure alkaloids as to suggest that these three alkaloids provide the major portion of the activity. Reserpine has been more widely used than any of the individual alkaloids. Although reserpine has been synthesized, attempts to alter its structure and enhance pharmacologic activity have not been very rewarding.

RAUWOLFIA ALKALOIDS

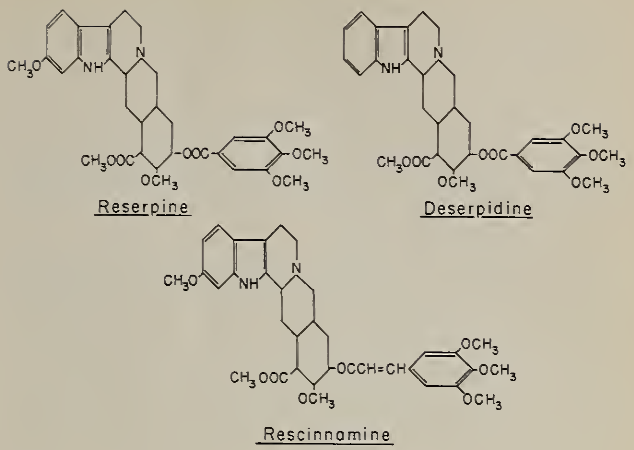


Chart 2

The sites of action of reserpine, like those of chlorpromazine, are chiefly subcortical.[3,19,20] Unlike chlorpromazine, reserpine stimulates the reticular activating system rather than depressing it. For this reason, reserpine is not as powerful a sedative as chlorpromazine. On the other hand, reserpine stimulates the amygdaloid complex much as chlorpromazine does. In monkeys, lesions of the amygdaloid complex produce behavioral effects similar to those of reserpine in normal animals. Alleviation of spontaneously occurring or conditioned anxiety in animals by giving them reserpine has been repeatedly demonstrated. The same is true of chlorpromazine. These actions, on the limbic system, the hypothalamus and the reticular activating system probably account both for the tranquilizing and the antihypertensive effects of the rauwolfia alkaloids. In addition, reserpine facilitates synaptic responses in the spinal cord, which may account for some of the neuromuscular effects of the drug.

These two pharmacologic actions, tranquilization and antihypertensive action, have been the main indications for the clinical use of the alkaloids. As with chlorpromazine, virtually every kind of psychiatric disorder, except mental depression, has been treated successfully with reserpine. For reasons which are still uncertain, Rauwolfia alkaloids aggravate existing cases of depression and may in fact produce it in patients not previously depressed.[7] The use of reserpine in psychiatry has declined recently. In the more severe psychiatric disorders, such as schizophrenic reactions, the phenothiazine derivatives appear to produce greater benefits, faster and in more patients. The noxious minor side reactions of reserpine (stuffy nose, lethargy and muscle aching) have made other tranquilizers (meprobamate, for example) preferable for treating emotional disorder of the milder types.

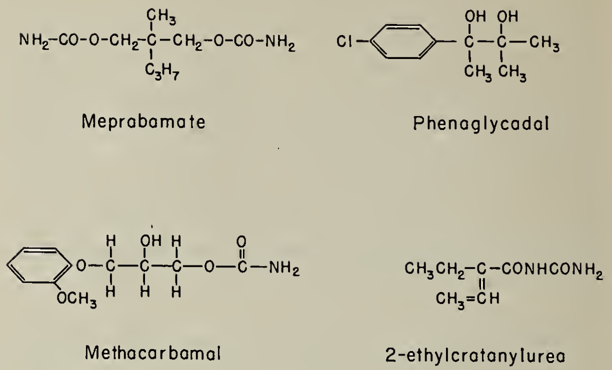
The Rauwolfia alkaloids remain the basic drugs in the treatment of hypertension. Early or mild hypertension can usually be managed solely with these drugs. Seldom is it necessary to give more than 2 mg. of reserpine daily, and maintenance doses may be as little as 0.25 mg. a day. Even severe hypertensive states may respond to large doses of reserpine given parenterally. However, practical management of severely hypertensive states over a long term requires combination of reserpine with other agents such as hydralazine, pentolinium or chlorisondamine.

Aside from the bothersome side reactions previously mentioned, the Rauwolfia alkaloids produce few major complications. Mental depression is still potentially the most serious (because of the risk of suicide). Oddly, this symptom seems to occur somewhat oftener in patients treated for hypertension than in psychotic patients. The large doses of reserpine used in psychiatric practice (usually in excess of 2 mg. daily) have been known to activate duodenal ulcers, sometimes with hemorrhage.[14] The danger of this complication is less when hypertension is being treated. Nevertheless, close attention should be paid to ulcer management when such patients receive Rauwolfia alkaloids. Rescinnamine and deserpidine are said to produce less sedation and mental depression than reserpine, alseroxylon fraction or whole root extracts. Thus, these compounds might be preferable for some patients.

Substituted Propanediols or Butanediols

Substituted propanediols or butanediols were developed originally to improve on the skeletal muscle relaxant properties of mephenesin. Meprobamate, the most widely used and studied of this group of compounds, is the dicarbamate form of a di-substituted propanediol. Its structure and the structures of some closely related compounds are shown in Chart 3. The addition of carbamate groups (CONH$_2$) seems to increase the sedative effects of these drugs. Strictly speaking, 2-ethylcrotonylurea is not a member of this group but its structure is shown to demonstrate how the inclusion of carbamate groups relates some of these compounds to the ordinary ureide sedatives, including carbromal and barbituric acid derivatives.

SUBSTITUTED PROPANE- OR BUTANEDIOLS


Meprobamate

Phenaglycodal

Methacarbamal

2-ethylcrotonylurea

Chart 3

These drugs are mild sedatives and hypnotics. As with the other tranquilizers, the sedative effects seem to outweigh the hynotic. This fact, as well as a subcortical site of action in the thalamus and internuncial neurones of the spinal cord, permits meprobamate and its congeners to be classified as tranquilizing drugs.[12] The muscle relaxant properties of these agents are weak and are only manifest with large doses. Clinical expectations from skeletal muscle relaxants have always exceeded the results obtained. Perhaps it is expecting too much of any generally acting drug to call upon it to alleviate a strongly triggered local muscle spasm. Weak anticonvulsant properties of drugs of this class have also been described.

Meprobamate has been used chiefly for treating temporary anxiety in "normal" persons as well as more severe and chronic anxiety in psychoneurotic individuals. The wide acceptance of this drug, both by patients and physicians, has been astounding. Although few controlled studies of the clinical effects of meprobamate are available, the drug appears to reduce the symptom of anxiety.[26] Whether or not it is superior to barbiturates is a question raised by some observers.[27] A few reports indicate beneficial effects in some schizophrenic patients, although not of the order obtained from the phenothiazine derivatives or Rauwolfia alkaloids. Treatment of depression with meprobamate, either alone or combined with benactyzine, has also been described.[1] The hypnotic properties of meprobamate are probably less than those of the barbiturates.[17] As meprobamate has no appreciable advantage in this regard and is considerably more expensive, barbiturates are to be preferred for treating insomnia.

Allergic reactions, often to the first dose of meprobamate, are the most frequent complication.[15] Withdrawal reactions following abrupt discontinuance of the drug have been described by a number of observers. Despite the profligate use of meprobamate in emotionally ill patients under poor supervision, only one successful suicide has been reported. As with barbiturates, the use of large quantities of this drug along with alcohol may be expected to produce fatal synergistic effects.

Diphenylmethane Derivatives

The chemical structure of the diphenylmethane derivatives, which permits considerable substitution, has allowed the creation of many derivatives with a sometimes confusing array of pharmacologic actions. Some of the more interesting derivatives are shown in Chart 4.

Hydroxyzine is both a sedative and potent antihistaminic. It has been used much as meprobamate is used in treating milder emotional disorders, as well as for treatment of skin disorders.[20] Benactyzine is also an anticholinergic, which is understandable, for it differs from adiphenine, one of the earliest synthetic anticholinergics, only in that it lacks an oxygen atom. Benactyzine is said to be useful in treating psychoneuroses, especially the specific symptoms of phobia and compulsion.[6] Azacyclonol has puzzled many investigators. The drug is said to block in man the model psychoses produced by lysergic acid diethylamide (LSD) and mescaline, and the electrographic changes produced by LSD in the reticular formation of rabbits.[8,23] It is said to be useful clinically in treating confusional states and the specific symptom of hallucinations. However, many investigators have been hard put to find any demonstrable clinical pharmacologic effects from the drug, even in large doses. The relative lack of therapeutic effects has practically eliminated the drug from current use in psychiatry. On the other hand, its isomer, pipradrol, is definitely a mild stimulant. Another drug of this series, isopropamide, is a rather long-acting and potent anticholinergic. Methylphenidate, a mild stimulant, is fairly closely related to this group.

Some of these diphenylmethane derivatives have a future in clinical use. Hydroxyzine, which has little or no toxicity, is being increasingly used as a sedative. Pipradrol and methylphenidate have found a place as mild stimulants that have somewhat less sympathomimetic effects than the amphetamines. However, drugs such as benactyzine and azacyclonol, despite an apparent lack of serious toxic effects, have not yet found a place in clinical medicine.

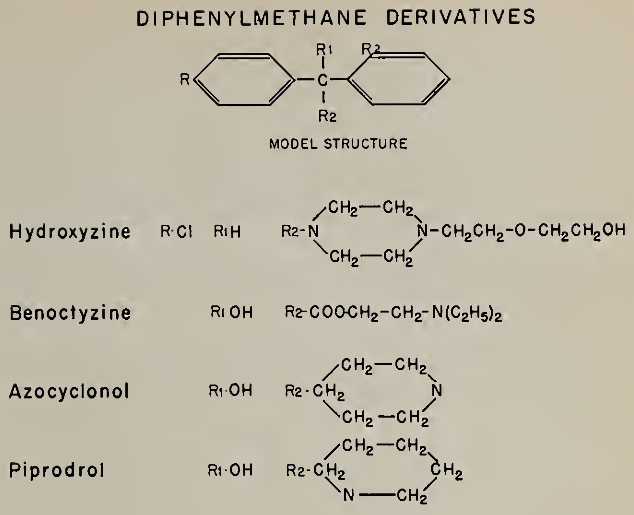


Chart 4

DISCUSSION

Few previous situations in medicine compare with the rapid development of tranquilizing drugs in the short span (less than five years) of their use. The sulfonamides and antibiotics come immediately to mind, but compared with the tranquilizers these agents progressed at a leisurely pace. The rapid evolution of tranquilizers is in part a reflection of a widespread public need for comfort in what has been dubbed an "age of anxiety." Then, too, the recent appreciation of mental illness as one of the costliest of human afflictions, both in terms of personal tragedy and public expense, has had its influence. The fact that chemical agents may ameliorate schizophrenic reactions has engendered some hope for the solution of this monumental problem. Finally, the development of a successful tranquilizing drug is a highly profitable venture for even the most altruistic pharmaceutical house. The intense competition for markets and prestige has contributed much to the speedy exploitation of these agents.

A great many social commentators, not all professional viewers-with-alarm, have decried the excessive use of these agents by "normal" persons. Even the most complacent observer must admit that these drugs have been abused. A conscientious physician must always do what is good for the patient, not what is most expedient. For some patients, a tolerable amount of anxiety which leads to problem-solving is far better than a temporary though pleasant relief. The tranquilizing drugs should be used when anxiety becomes disabling, and then only when coupled with efforts to find and remove the source of anxiety. While the taking of tranquilizers might be preferable to a rising tide of alcoholism (or, in other cultures, smoking the dried juice of poppy buds or chewing coca leaves), it should not be encouraged as a national practice.

Tranquilizing drugs have been heralded as a major breakthrough in the problem of schizophrenia. Scarcely anyone free of prejudice can deny that many severely psychotic patients have been considerably helped by these drugs, especially the phenothiazines and Rauwolfia alkaloids. For acutely ill patients the course of illness may be shortened, permitting a briefer period in hospital. Many chronically psychotic patients who seemed doomed to a lifetime in mental hospitals are now able to function outside. As a result, the total mental hospital population is now beginning to decline, reversing a long trend upward. The effects within the hospital and on patients still in hospital has also been beneficial. Mental hospitals have accelerated efforts to become treatment centers rather than custodial institutions. The fact that many more patients are now able, owing to tranquilizers, to participate fruitfully in psychiatric rehabilitation programs has provided much of the impetus. While the total effect is still pitifully small, tranquilizing drugs have provided some measure of hope for these patients.

Perhaps more important than the benefits of these drugs for individual patients may be the renewed interest they have aroused in the neurophysiologic bases of mental disorders. These drugs act in areas of the brain which have been found to be important in emotional reactions and the expression of those reactions: The thalamus, hypothalamus, reticular activating system and the limbic system. Indeed, the subcortical action of these drugs is the major distinction between them and conventional sedatives. The fact that reserpine releases serotonin, a neurohumoral agent, from the brain and that chlorpromazine has a potent anticholinesterase activity suggests that these drugs might act by neurohumoral mechanisms.[22] They also affect synaptic transmission in the brain, which it has been postulated may be disturbed in cases of mental disorders.[18] Finally, the relationship of these agents to hallucinogenic substances, especially their ability to block the psychotomimetic actions, may be relevant to the problem of psychosis. However, despite an increasingly intensive investigation of these phenomena, the relative importance of any of them to the cause and treatment of schizophrenic reactions remains conjectural. Fortunately, in medicine we have neither to know the cause of the disease nor the way a treatment works in order to practice therapeutics successfully.

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Hirschsprung's Disease

The Clinical Differentiation and Treatment of Children with Hirschsprung's Disease and Pseudo-Hirschsprung's Disease

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• Hirschsprung's disease is marked by constipation from the time of birth, with the development, if uncorrected, of a protuberant abdomen and flared costal margins. The rectal ampulla is empty and the abdomen is filled with fecal masses. Pain is not prominent. Flatus is passed in large amounts. Encopresis does not occur. Barium enema shows the characteristic narrowed distal rectal segment and biopsy of the rectum shows absence of the ganglion cells of the myenteric plexus.

Treatment is operative resection of the distal narrow segment and a primary anastomosis.

Hirschsprung's disease may be mimicked in children with:

1. Psychogenic constipation—pseudo-Hirschsprung's disease. Unlike Hirschsprung's disease, symptoms do not appear at birth, encopresis is common, and the barium enema shows no narrow distal segment.

2. Mental retardation and cerebral defect.

3. Corrected imperforate anus—on the basis of stenosis, imperfect innervation or poor habit training.

4. Cretinism—with severe constipation and intestinal dilatation perhaps the presenting symptoms.

Treatment of these four groups of children with severe constipation not due to Hirschsprung's disease is:

For Group 1, open discussion with parent and child. Assumption by the physician of full control of the details of treatment, and relegation of parent to the role of the physician's agent in following the prescribed regimen.

For Group 2, an enema regimen. Whereas fairly rapid restoration (and then persistence) of normal bowel habit can be expected in Group 1, the basic defects in Group 2 may require indefinite continuation of treatment.

For Group 3, regular enema regimen, in the less severe cases—one identical with that used in Group 1, and dilatation of strictures or anoplasty.

In Group 4, thyroid hormone therapy relieves the constipation of hypothyroidism and causes reversion of radiographic changes in the colon and rectum.

WHEN HIRSCHSPRUNG in 1888[5] made his initial report on the disease which today goes by his name, he made a number of observations which remain valid today. He pointed out that in both of his patients difficulty with evacuation had begun at birth, that in both of them the colon was enormously dilated and hypertrophied, but that, despite this, in both of them the rectum was of normal diameter, or actually decreased in caliber. He also made the observation that the mucosa of the dilated segment was ulcerated and inflamed and he postulated that this was the result of obstruction and the retention of fecal masses.

In true Hirschsprung's disease, if a reliable history in the obstetric nursery is available, distention, constipation and the necessity for enemas almost from the time of birth will regularly be noted. The condition persists or progresses. The abdomen becomes enlarged and protuberant. The costal margins flare. Fecal masses are repeatedly palpable in the abdomen. The children rarely pass stools spontaneously and then only scybala. Flatus, on the other hand, is passed with annoying frequency and in large amounts. A successful enema brings about evacuation of huge quantities of stool. Then for perhaps a day or two there are inadequate evacuations, and then obdurate constipation. Pain sometimes occurs, but is not common. Distention may be so extreme as (in infants) to cause death from respiratory embarrassment, with the diaphragm so high that the diagnosis of eventration has been made at times. Repeated hospital admissions are required for crises of constipation. With assiduous home care and regular enemas such crises may be made infrequent but are rarely altogether eliminated. Incontinence does not occur. At times ulceration of the distended bowel, described and correctly interpreted by Hirschsprung as secondary to stasis and erosion by fecal masses, results in bloody diarrhea concomitant with continued distention and palpable abdominal fecal masses. Ordinarily, sphincter tone is normal and the rectal ampulla is empty.

Despite the fact that many observers suggested that the disease was neurogenic in origin and despite the fact that a number of papers described the absence of the ganglion cells of the myenteric plex-

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uses in groups of children with congenital constipation, the true nature of the disease remained unclear until about ten years ago. At that time Neuhauser and Swenson[10] demonstrated the characteristic radiologic appearance of the barium enema in Hirschsprung's disease. They showed that there was invariably a normal sized or narrow rectal segment and a dilated proximal sigmoid or descending colon. Reasoning that this narrowed segment was at fault, Swenson devised a method for performing an external anastomosis, quite close to the anus, in order to obviate the difficulties of a low intrapelvic anastomosis after resection of the rectum and distal sigmoid. The results were immediately striking and the operation has been widely accepted. When the operation, with minor modifications, was undertaken by Stephens and Browne at the Hospital for Sick Children at Great Ormond Street, their pathologist, Bodian,[3] reported that, in the distal narrow segments which were resected, the ganglion cells of the myenteric plexus were systematically missing.

The treatment of Hirschsprung's disease is therefore now on a sound basis. We have a sharply drawn clinical picture, a pathognomonic radiologic finding, an invariable histologic finding, and a well conceived and effective operative procedure. It is, of course, possible to manage many of these children by a careful regimen of cathartics and enemas, but this seems hardly wise. At times, even with the most conscientious management, almost complete intestinal obstruction results, and in infants this may frequently require colostomy.

My preference is for the Swenson type operation, but with this modification. Instead of resecting the bowel and then pulling down the divided proximal end, I prefer to divide the mesentery of the bowel which is to be resected and then to intussuscept this bowel through the distal bowel, pulling the entire intact specimen out through the anus. The bowel is transected close to the anal crypts and a two layer anastomosis performed upon the extruded cut ends. This is done when the abdomen is still open, so that, if necessary, more bowel may be freed. Incontinence does not seem to occur, and since the dissection is carried close to the bowel, there is no need to anticipate the occurrence of sexual impotence in males.

The knowledge that an effective surgical treatment is available has perhaps led to more frequent early surgical consultation in children with obstinate constipation. I am more frequently asked for a surgical opinion relative to operation for Hirschsprung's disease in children with some other kind of condition, than relative to children with true organic Hirschsprung's disease.

Patients referred for treatment of megacolon in whom the difficulty lies elsewhere than in the congenital absence of ganglion cells of the myenteric plexuses of a segment of the rectum, or of the colon and rectum, may be divided into four categories—those with:

1. Pseudo-Hirschsprung's disease on a psychogenic basis in otherwise normal children.
2. Megacolon and obstinate constipation in mentally defective children.
3. Megacolon and obstinate constipation associated with organic anal obstruction.
4. Megacolon and obstinate constipation in congenital cretins.

With the clinical characteristics of these conditions kept in mind, there should be little or no difficulty in diagnosis.

1. Pseudo-Hirschsprung's Disease on a Psychogenic Basis in Otherwise Normal Children.

This is far commoner than the organic disease that is due to absence of the ganglion cells of the myenteric plexus. The patients still often are classified as having "idiopathic megacolon." Discussions of the therapy of this condition are rare, and frequently it is either described as "extremely difficult to cure" or is totally neglected.

Characteristically, medical advice as to the children is sought when they are at the age of three to four years or thereafter. A history of constipation beginning in the third or fourth year or later is usually clearly obtainable. The pathognomonic giveaway—almost regularly occurring and frequently forming the presenting complaint jointly with constipation—is fecal incontinence. Fecal incontinence never occurs in Hirschsprung's disease, and if it occurs at all the possibility of that diagnosis is foreclosed. In the group of children under discussion, distension is moderate, unlike the situation in Hirschsprung's disease, or is entirely absent. Flatus is not conspicuous. Fecal masses may be quite as large and hard as may be found in Hirschsprung's disease. Abdominal pain is a common event. The perianal region is often smeared with feces. The anus and sphincter are normal, and the rectal ampulla is filled with a mass of feces, often filling the pelvis. The most superficial questioning readily elicits rich evidence of tension, hostility and neurotic difficulties in parents and child. Oddly, while the mother is usually mortified by the encopresis, the child often appears to accept it calmly, matter-of-factly, without evidence of shame or agitation. This will obviously depend, to some extent, upon the degree to which the mother impresses her reaction upon the child and the degree to which the child has withdrawn into its shell. Quite often there is a sharp history of extremely early habit training.

Some of these children "fought the pot" and successfully resisted such premature attempts. Others appeared to surrender gracefully and tractably, and their subsequent relapse into repulsive delinquency is all the more harrowing and perplexing to the obsessive mothers who took such pride in their earlier triumphs.

Huschka,[6] who has been interested in the psychiatric aspects of the problem, said that the infant shows its awareness of the need to defecate by physical signs such as grunting and wriggling, usually between the ages of eight months and fifteen months. She estimated that "training" can usually be completed by the ages of 18 months to two years. In a discussion of coercive training methods, she mentioned the premature institution of training (infants can actually be taught a sort of reflex continence at two to three months), rigidity of schedule, unduly frequent placement on the toilet, employment of shame as punishment for failure, psychological pressure by placing a "high love premium" on success, strapping the child to the seat until success is achieved, use of suppositories for stimulation or forcing a child to "speak up" and announce his wants when he is just learning to talk. Threats, bribes and punishment are obvious coercive methods.

Huschka found that in a group of disturbed children whose primary problem was not constipation or encopresis, there were 30 in whom there was an adequate history of the use of coercive methods and in whom the child's reaction could be reliably elicited. Twenty-one of the 30 had responded by constipation or loose stools, rage, incontinence or obsession with excessive cleanliness. Response of this type is natural and understandable. The encopresis in pseudo-Hirschsprung's disease may vary from regular overflow soiling of the clothes when the child is finally unable to restrain defecation, through regular and complete evacuation into the clothes at long intervals, to bizarre habits of defecation about the house. It has been noted that many of these children defecate when standing—evidence perhaps of an unyielding wish to avoid defecation. While it is often said that the encopresis represents failure of inhibition of defecation, it has at times seemed apparent to me, and presumably to the children at some level of consciousness, that encopresis represents as effective a weapon against authority as does constipation.

Roentgenograms in pseudo-Hirschsprung's disease of this kind show a large, redundant, atonic colon which may well mimic the colon in Hirschsprung's disease with regard to size, and to quantity of retained stool. Proper studies will show the dilatation to involve the rectum and reach the anal canal. The narrowed segment that is characteristic of Hirschsprung's disease is never seen. The diagnosis can usually be made on history alone. In some cases the reasons for fixing attention on the bowel are obvious and in others less so. In rare instances, biopsy of the rectal wall may be required to determine the presence or absence of ganglion cells. The following cases are illustrative.

CASE 1. A five and a half year old white boy had progressive constipation from the seventh month. He had had no difficulty until that time, had sat up at five and a half months, walked at 12 months. Habit training was begun at five and a half months and was said to be difficult because the child would sit indefinitely. He began to rebel against sitting on the toilet; he cried and struggled. The constipation was progressive until he would go five to seven days without a stool. On the fifth and sixth such day he might vomit. Rarely, he complained of pain. Abdominal distention was never pronounced. Fecal impaction required manual extraction about once in six months. No treatment had been given, the mother waiting until he had a stool—and "he usually does"—with manual assistance from her if necessary. The child had always been hard to feed.

A cardiac murmur, noted at the age of four weeks, led to proscription of much normal physical activity. At the time of examination the child was deliberately and repeatedly hysterical, screaming or complaining in rapid succession of hunger, abdominal pain, and the like. He cried, jumped about, beat his face with his hands, pulled at his mother. He could be made to calm down by a show of quiet firmness and, with his mother out of the room, was completely tractable. The abdomen was not protuberant, there was a fist-sized, freely movable fecal mass in the right upper quadrant and several smaller very hard masses throughout the abdomen. Rectal examination showed good sphincter tone and a capacious ampulla filled with feces. Barium enema showed a voluminous redundant colon which evacuated poorly.

The mother was extremely obsessive. It was obvious from her account that every minute of the child's life had been planned and sharply observed, that perfection had been expected of him and absolute regularity of performance in all respects demanded of him.

The home situation seemed so difficult that the child was admitted to the hospital. Enemas, given twice daily for one week, were productive each time of large amounts of soft stool. At the end of a week the enemas were stopped and the child continued to have one or two large movements per day without any difficulty at all. He stayed in the hospital for two more weeks, having normal and regular bowel movements.

In this instance an obsessive mother smothered her child with care, perhaps because of the cardiac murmur, and premature attempts at bowel habit training focussed the child's rebellion in that direction.

Obviously the relief obtained by such therapy is no more than symptomatic. The fundamental problem would require prolonged psychotherapy of the mother. However, both the mother and child were convinced that the child could have daily bowel movements without any continued treatment, and a very troublesome symptom was relieved.

Case 2. The patient was a six and a half year old boy who had been born one of two premature fraternal twins. His twin was larger, more athletic, more aggressive. The patient was less well coordinated, had a decided squint and required glasses. The patient had been born with a thin membrane over his anus, which was opened by a surgeon. From early childhood the patient had had trouble with defecation and numerous remedies had been tried. Repeated x-ray studies had showed the colon to be enormous. The boy was able to go a week or more without a stool. At times he had abdominal pain, and rarely he vomited. On the other hand he would at times go as long as two or three months without missing a day's defecation. His underclothing was frequently heavily soiled. The mother said that on repeated occasions when she and the father were away travelling, the child evacuated daily. On the other hand the difficulty with constipation was likely to be aggravated at any time his twin brother achieved some new talent, like swimming or riding a bicycle, before the patient did.

Upon examination the patient was observed to be an obviously bright little fellow with thick-lensed glasses. The abdomen was full and there were numerous loops of feces-packed bowel and several large, hard fecal masses. The anus admitted the examiner's finger easily. The sphincter tone was good. Immediately within the sphincter was a great mass of moderately firm feces. When the numerous barium enema examinations which had been performed over the preceding several years in an attempt to diagnose or exclude Hirschsprung's disease were reviewed, the colon was seen to be greatly dilated, particularly the sigmoid, which was very large and never seen empty. There was no narrow segment.

The family and the boy were told together that with the proper management this condition could be entirely corrected. On the prescribed regimen he began having spontaneous stools almost at once, with occasional brief periods of constipation, usually coinciding with deviations from the planned program. By the end of the month he was having very little difficulty. He had never soiled since his first visit. It was actually ten months before perfectly normal bowel habit was firmly established. At the end of 14 months the family and the boy were told he was perfectly well, that his bowel could be totally ignored, just as would be a fractured leg which had healed. He had no abnormality of bowel habit afterward.

In this instance the physically less fortunate member of fraternal twins reacted to difficulties by constipation and incontinence. The presence at birth of an anal membrane and the family's subsequent preoccupation with the possible significance of this anomaly amply explains the form in which the patient expressed his reactions.

Instances could be multiplied, but in every case there is good evidence of some emotional disturbance in the family situation and in every case the constipation did not begin at birth, and in almost every case incontinence is a conspicuous feature. It takes more than poor training methods to produce a reaction of this type in a child. A number of the children with this condition come from broken homes, and others come from homes in which there is severe tension. The poor training methods appear, if anything, to be no more than symptomatic of the maladjusted parental personality, and it is therefore not surprising that a number of these children showed substantial deviations from standard behavior in other respects than bowel habit. It can hardly be disputed, therefore, that proper treatment of these children would require extensive psychiatric work with both parents and children. Of first importance, however, is the necessity for immediate recognition of the diagnosis, and the separation of this condition from true Hirschsprung's disease. The sooner and the more firmly such a distinction is made, and the fact impressed upon parents and patients that operation is out of consideration, the sooner can rehabilitation be begun.

Psychiatrists generally take the attitude that constipation and incontinence are merely symptoms which not only can be ignored but should be ignored, in order not to focus further attention on the anus and on the act of defecation.

Undoubtedly excellent results can ultimately be obtained purely by psychiatric treatment of the patient and family. This is laborious, expensive and may require many months or years of repeated visits by patients and parents. On the other hand, where several years of intensive family concern have been concentrated on the act of defecation, it is unlikely that a few weeks or months of further attention in the form of treatment such as has been indicated in this discussion, will alter the picture in any harmful way. Furthermore, the symptom itself is an extremely annoying and disturbing one—always to the parents, and frequently to the patients. Direct relief of the symptoms may very well facilitate the problem of psychiatric handling of the patient and family.

Most of the children referred for examination because of symptoms referable to this condition are five or six years old or older, although symptoms had usually been recognized from the age of three or four, or occasionally a little earlier. Hence it is possible to talk with the children as well as with the parents. I make a point of speaking to the patient and parents jointly and explicitly, and religiously avoid additional side conversations with either. They are told that this is a matter of habit training, that it can be corrected by proper training, that there is no organic abnormality of the bowel, and that operation will not be considered at all. They are told that a precise regimen will be prescribed, that deviation from it will not be tolerated, and that responsibility for the regimen is taken entirely out of the hands of the parent, who has no discretion in following the orders of the physician or in deviating from them. This comment, itself, is extremely important, for once the child understands that the parent is merely a passive agent of the physician, he finds less profit in thwarting the parent. At the same time, once the parent knows, and is aware that the child knows, that primary responsibility has been shifted from the parent to the physician, the parent is in a position to follow instructions without responding to pressure from the patient, and without feeling that there has been any surrender to the patient.

In a few instances—those in which the home situation is extremely disturbed or the patients come from a distance and cannot be continuously observed, or the parents are so loath to believe that the condition is not organic and does not require an operation that it is feared they will not be capable of cooperating with the prescribed regimen—in such cases it is necessary to admit the children to the hospital. Hospitalization alone is frequently all that is required to straighten out the bowel habit in such children, at least for the period of hospitalization, and one frequently obtains from the history accounts of symptom-free periods when the parents are away from home, or when the children are visiting relatives. The principal virtue of putting the patient in hospital lies solely in the fact that the mother can be convinced that the child can achieve a normal bowel habit and that the child can be convinced that the physician knows this. In most cases successful treatment can be carried out on an out-patient basis, substantial success being achieved within a period varying from two or three weeks to two or three months.

To begin with, the patient is given as many large tap-water enemas as are required to empty the colon completely of the inspissated fecal masses. After consultation with the parent and discussion of the whole situation, a decision is made as to the most convenient time in the family schedule for the child's daily bowel movement. Usually this will be immediately after breakfast. Occasionally circumstances will suggest that it would be more convenient immediately after the evening meal. Parent and child are instructed that for the first two weeks daily at the appointed time, and without any preliminary discussion and without threats, bribes, rewards or postponement, a one-quart enema of warm tap-water is to be given. This is to be given whether the child has spontaneous stools in the interim or not.

At the end of two weeks the child and mother are seen again. If the regimen has not been strictly adhered to they are instructed to adhere to it strictly and to return in a week. Once the parent and child are convinced that there is no recourse but to follow instructions precisely, improvement will follow readily.

For the next two weeks the child goes to the toilet seat at precisely the same time that the enemas were given. He and his mother are instructed that at the end of ten minutes the mother will inspect the toilet bowl. If there is a large and copious stool, no more need be done. If there is no stool, or only a small one, a one quart, warm tap-water enema is given at once. Again this is without discussion of any sort, but entirely automatically; and it is made plain that no delays for further efforts are to be considered. Usually within two to four weeks the child will be found to be evacuating daily without an enema. Once this pattern is established, both parent and child are strongly encouraged, and the occasional lapses are found to be farther and farther apart. Once regularity is apparently firmly achieved, mother and child are instructed to forget all about the problem of defecation on the basis that the child has a normal bowel, now has a normal bowel habit and needs no more attention to defecation than does anyone else.

It is perfectly true that there is no valid reason for requiring everyone to have a bowel movement every day. On the other hand, the foregoing method has proved to be simple and effective. No drugs of any kind are employed. If habitual constipation is too long neglected, there may finally emerge a habit of chronic constipation which is not correctable and requires a lifetime of enemas and cathartics.

2. Megacolon and Obstinate Constipation in Mentally Defective Children

There is certainly no reason to suppose that there will not be an occasional child with true Hirschsprung's disease who also has an organic cerebral defect. On the other hand this will manifestly be a great rarity, while more commonly chronic constipation, perhaps with encopresis, will be prominent in a mentally defective patient. Among such cases in my records are that of a child four and a half years of age with agenesis of the right cerebral hemisphere, and another in which the patient was microcephalic. Both were referred for consideration of surgical relief of chronic constipation.

The therapy in mentally defective children with obstinate constipation depends upon administration of enemas daily with absolute regularity. These serve the purposes of emptying the colon, avoiding retention of feces and avoiding the nuisance of encopresis on the one hand and in addition holding the promise of ultimately establishing the kind of automatic bowel habit that can be obtained even in patients with abdominal colostomy.

3. Megacolon and Obstinate Constipation Associated with Organic Anal Obstruction

One would suppose that if there is a straightforward history of an imperforate anus with surgical repair at birth, later constipation and incontinence would be attributed to this condition and to the operation and not to Hirschsprung's disease. The fact is that even though very good continence is achieved with successful repair of an imperforate anus, it is not always easy to establish good bowel habit. Whether this is due to psychologic reasons, with heavy concentration on the abnormal area by the anxious family, whether it is due to organic stricture (as it surely is in some cases), or whether it is due, as Swenson postulates, to the fact that the bowel which is brought down to the anus is not normally innervated, the fact remains that regular bowel habit is frequently difficult to establish. I was astonished to find, in not extremely old records, five cases in which the patients had had imperforate anus, with surgical correction, and subsequently were observed at the hospital for "megacolon." These patients came to the hospital with complaints of constipation, distention, encopresis and fecal impactions due to failure to prevent stricture formation in the operative area. It is embarrassing to report that one of these patients had actually had sympathectomy for putative Hirschsprung's disease (this was before 1949) and that another was advised to have sympathectomy but the operation was refused and a plastic operation on the anus, done later at another hospital was entirely successful. A letter from the patient years later reported that he was normal and had a perfectly normal bowel habit despite the fact that the colon had once been enormous.

Conceivably an imperforate anus may occur in a child with absence of ganglia in the myenteric plexus. This will be so rare as scarcely to be worth considering. In the children under discussion, dilation of the stricture and proper habit training will achieve relief. Anal plastic procedures are most infrequently required.

4. Megacolon and Pseudo-Hirschsprung's Disease in Congenital Cretins

Intestinal disturbances in association with myxedema are well known and constipation is the commonest. Abdominal distention and functional megacolon or dolichocolon have been described, with great dilatation of the entire intestine and even of the stomach. These changes respond to treatment with thyroid extract and are reversible if treatment is not too long delayed. In newborns and infants in whom the diagnosis of cretinism may not be readily apparent, abdominal distention and obstipation may be the presenting symptoms. The clinical features may strongly resemble those of Hirschsprung's disease; indeed in a case reported by Salmi and Lakesmaa[8] they were indistinguishable from those of Hirschsprung's disease. The patient in the latter case was a girl baby who became constipated at the age of three weeks and was first examined therefor at the age of four weeks. A plain x-ray film of the abdomen showed distention of intestines, and at six weeks there was great distention of the colon and a roentgenographic study with barium enema was absolutely typical of Hirschsprung's disease. At this time there was a suggestive appearance of myxedema, but a diagnosis of Hirschsprung's disease was made and non-operative therapy was prescribed. When the patient was three months old she was passing stools at intervals of three to four days but by then appeared typically myxedematous. Therapy with thyroid extract was begun, and immediately the myxedematous appearance abated. After three weeks a barium enema study was essentially normal and the bowel functioned regularly. I have seen two children with cretinism in whom a large abdomen and severe and stubborn constipation were the most prominent symptoms, and in whom, for a time, the diagnosis of Hirschsprung's disease was maintained.

Obstinate constipation, of course, may also be a symptom secondary to acquired hypothyroidism.

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Cardiac Operations Under Direct Vision

Experience with Extracorporeal Oxygenation of the Blood

JEROME HAROLD KAY, *M.D.*, ROBERT M. ANDERSON, *M.D.*, LOUIS C. BENNETT, *M.D.*,
EDWARD N. SNYDER, *M.D.*, and JOHN E. MEIHAUS, *M.D.*, Los Angeles

• **A heart-lung machine capable of oxygenating the blood and maintaining normal pressures during cardiopulmonary by-pass was used in 11 cases in which cardiac operations with the heart under direct vision were carried out. The first patient died. Improvements then were made in the machine and it was used in ten additional operations. One of the ten patients died, 18 hours postoperatively, of cardiac tamponade. Since then six more patients have been operated upon with no complications.**

In the middle 1930's Gibbon of Philadelphia began work on an apparatus which would be capable of performing the functions of the heart and lungs. He felt that this would enable surgeons to operate upon intracardiac anomalies under direct vision—open heart operation—in a relatively dry, bloodless field while the brain, myocardium, liver, kidneys and other tissues received adequate flows of oxygenated blood. In 1953, after many years of research, Gibbon reported the first successful operation on the heart of a human subject with the operative field visible and a heart-lung machine oxygenating the blood. The operation consisted of closing an atrial septal defect. In 1954, Senning and Crafoord in Sweden successfully removed a pseudomyxoma of the left atrium. In March, 1955, Kirklin of the Mayo Clinic began to perform operations in which a heart-lung machine of the Gibbon type was used for extracorporeal circulation.

At about the same time Lillehei of Minneapolis started a series of direct-vision intracardiac operations in which controlled cross circulation was used. He soon abandoned cross circulation for the DeWall bubble oxygenator.

At present, there are only two practical methods of oxygenating the blood; one is spreading the blood in a thin film in an atmosphere of oxygen, and the other is mixing bubbles of oxygen in the blood. Disadvantages of the bubble oxygenators are that they cannot maintain sufficient oxygenation for adequate flow, the complete removal of bubbles is difficult and the method destroys many of the constituents necessary for clotting of the blood.

The authors of this communication have used bubble oxygenators, hypothermia, reservoir perfusion and homologous lung oxygenators and have turned away from them as it seemed that the most promising approach to open heart operations was offered by extracorporeal apparatus using the filming technique. Two of us (Kay and Anderson) developed a pump oxygenator apparatus (Figure 1) from three years of research work in which more than 300 experimental operations employing total cardiac by-pass were carried out.

The pump oxygenator is run in the following manner: Blood is returned by gravity drainage from the superior and inferior venae cavae to the venous reservoir. It is then pumped by way of a roller pump to the distribution chamber at the top of the oxygenator. From there it flows onto a series of 12 screens which are suspended from the distribution chamber. Ten liters per minute of a mixture made up of 97.5 per cent oxygen and 2.5 per cent carbon dioxide flow into this chamber and oxygenate the blood. The blood passes through a filter and is pumped into the aorta by way of the femoral artery or subclavian artery. The apparatus is capable of oxygenating and delivering an amount of blood equal to normal cardiac output.

Three milligrams of heparin per kilogram of body weight are used to prevent clotting of blood in the apparatus during perfusion. After by-pass is effected, an equal amount of protamine is used for neutralization of the heparin. In experiments on animals undergoing total cardiac by-pass for a half hour to an hour, it was noted that there was 10 to 20 per cent decrease in the platelets and fibrinogen. There was no postoperative clotting difficulty and the animals received the same amount of blood as they would for routine thoracotomy. There was very little destruction of red blood cells during the period of perfusion and the amount of hemolysis in a half hour to an hour of cardiopulmonary by-pass was less than 50 mg. per 100 cc. of blood. Metabolic acidosis did not occur during or after the period of by-pass. The amounts of pyruvic and lactic acids were within normal limits. In the last 12 consecutive

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From the Department of Surgery, University of Southern California School of Medicine and Saint Vincent's Hospital, Los Angeles. Aided by grants from the American Heart Association and the Attending Staff Association of the Los Angeles County Hospital.

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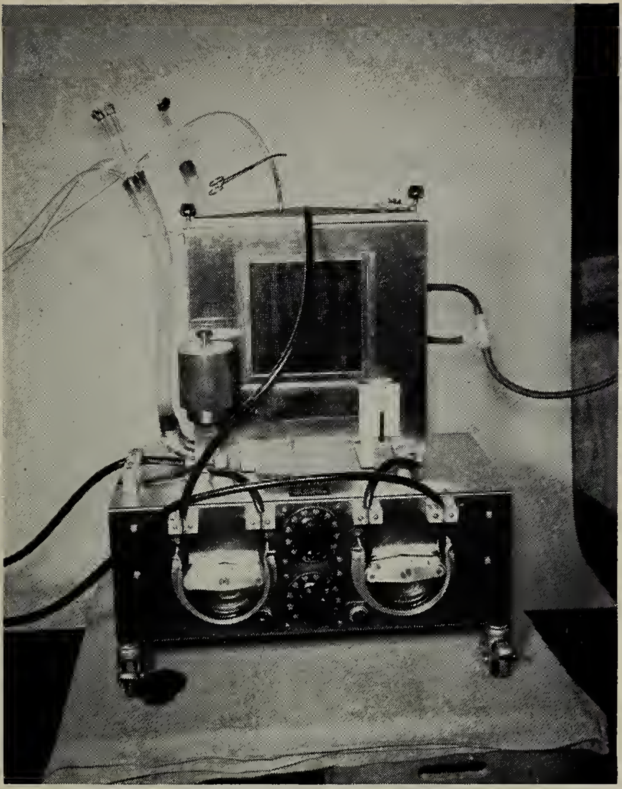

Figure 1.—Kay-Anderson heart-lung machine which consists of two roller pumps and a stationary screen oxygenator. Apparatus is compact and simple to use.

procedures on experimental animals, the heart-lung apparatus was used to by-pass the heart for periods of a half hour to an hour. All the procedures were successful and all the animals survived for long terms. The apparatus then was used clinically. The first procedure was performed on July 12, 1957. The patient was operated upon for a large atrial septal defect and possible ventricular septal defect, and a patent ductus arteriosus. Elective cardioplegia was used, potassium citrate being employed. After 32 minutes of open heart operation, using the heart-lung machine, the machine was stopped and the heart began to beat. However, an effective beat was never restored despite three hours of attempted resuscitation.

Thereupon, further experimentation was performed in the research laboratory and the heart-lung machine was greatly improved and simplified.* It can be sterilized by autoclave. On December 12, 1957, the improved apparatus was used for the first time in an operation on a human subject. The operation consisted of closure of a ventricular septal defect and the patient made an uneventful postoperative recovery. The next two patients, both operated upon for closure of a ventricular septal defect, also did well. In the next case the patient had an atrial septal defect and a ventricular septal defect. Both defects were closed very well. The pericardial sac was closed loosely with four interrupted sutures, as we had done in the previous patients. Postoperatively, the patient was alert and awake but the blood pressure was not adequate, which was believed to be owing to inadequate replacement of blood. Transfusion of blood did not bring about an increase in pressure, however, and the patient died 18 hours postoperatively. At postmortem examination it was observed that, although ample space had been left for blood to leak out of the pericardial sac, enough blood had remained in the sac to form a clot 2 cm. thick around the entire heart, which caused cardiac tamponade and resulted in low blood pressure. The atrial and the ventricular septal defects were both closed very snugly. The ventricular septal defect was located immediately beneath the aortic valve.

Between the foregoing case and the time this report was written, the Kay-Anderson heart-lung machine was used in six additional cases. One patient had a tetralogy of Fallot and a patent ductus arteriosus. The tetralogy of Fallot was completely cured by resecting the infundibular stenosis and suturing the ventricular septal defect. One of the six patients had an atrial septal defect and a valvular pulmonic stenosis. The atrial septal defect was closed and the valvular pulmonic stenosis was incised, under direct vision. The remaining four patients in the series had large ventricular septal defects, which were completely closed. One of these patients also had an anomalous left superior vena cava which drained into the coronary sinus. All of these last six patients have done very well.

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*Constructed for the authors by Corco, Inc., Los Angeles.

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Hepatocerebral Dysfunction

WILLIAM W. HOFMANN, *M.D.*, San Francisco

• The neurological manifestations associated with acquired liver disorders of various types may present difficult diagnostic problems until the condition is far advanced. Bizarre psychological and motor disorders occur when the central nervous system is affected by liver disease. The clinical features may in some ways resemble those of Wilson's disease, but such features as remitting coma, fetor hepaticus and seizures in "cholemia," and a Kaiser-Fleischer ring in hepatolenticular degeneration help to distinguish the two conditions. The biochemical abnormalities found in all types of hepatocerebral dysfunction may be quite similar one to another. While many studies suggest that the whole problem is simply the result of brain intoxication by a substance such as ammonia, other lines of evidence indict several factors in intermediate cerebral and liver metabolism. The treatment involves use of substances which may relieve certain blocks in biochemical processes, supplementary vitamins, low protein intake and strict avoidance of all neuro- and hepatotoxins.

WHILE RECENT biochemical investigations have focussed attention on the liver in certain kinds of brain disorder, the relation between a sick liver and a sick brain is neither newly discovered nor at all specific. Cerebral dysfunction with liver disease has been described frequently ever since the time of Galen and the cerebral disorder is really not more unusual than that seen with certain diseases of the kidney, adrenals, or pancreas. What may be of some interest, however, is that certain heredofamilial liver and brain disorders may be closely mimicked by acquired conditions and that patients with unsuspected liver disease may present trying diagnostic problems in the neurological, medical, surgical or even psychiatric wards. Neither the venerable hepatocerebral decompensation now known as cholemia[10] or hepatic coma, nor the genetically influenced hepatolenticular degeneration of Wilson should present a difficult diagnostic problem when the condition is advanced; but less advanced stages, especially in the former disorder, may be misdiagnosed and mistreated unless the possibility of liver disease is entertained and explored.

The purpose of this paper is to describe the diffuse neurological manifestations of acquired liver disease and to enumerate some of the recent speculations as to etiology. Before proceding to a discussion of cholemia, however, a few words regarding familial hepatolenticular degeneration may be in order.

Around 1880 Homen[9] published reports of a family with cavitation in the lenticular nucleus, cirrhosis and bizarre motor disorders. Other similar reports followed rapidly and all observers were impressed with the clinical similarity that this condition bore to hysteria, which had just been defined at about that time. Westphal and Strümpell[20] then described chronic cases with the term *pseudosclerosis* because of its resemblance to multiple sclerosis. Fleischer[6] next described a pigmented ring at the corneoscleral junction in three cases of Westphal's pseudosclerosis, and Kaiser had previously described such a ring in what he thought to be multiple sclerosis. Wilson,[25] in 1912, combined all these factors, calling the syndrome *progressive hepatolenticular degeneration,* and he expressed belief that pseudosclerosis was but a variant of the picture. Later Denny-Brown[4] indicated that there was perhaps justification for distinguishing the two conditions, since pseudosclerosis tended to occur later in life and was of longer course. More recent pathological studies show clearly that the neurological lesions involve far more than simply the lenticular nucleus in both conditions. The genetic influence manifested in these cases seemed to set them sharply apart from the "cholemia" or hepatic coma known since ancient times and, in spite of many attempts to relate Wilson's disease to that seen with acquired liver failure, certain clinical signs may also allow for differentiation. Never has a Kaiser-Fleischer ring been observed in cholemia or hepatic coma. The tremor of hepatic coma is rarely if ever as severe as the violent intention tremor of Wilson's disease, and fetor hepaticus has not been reported in the latter condition. The difference in clinical features may be merely the result of quantity and duration, however, since many metabolic aberrations, including the metabolism of copper and nitrogen, are common to both.

Now, to return to a consideration of acquired liver and brain disease. It is clear that the condition has interested investigators in almost every branch

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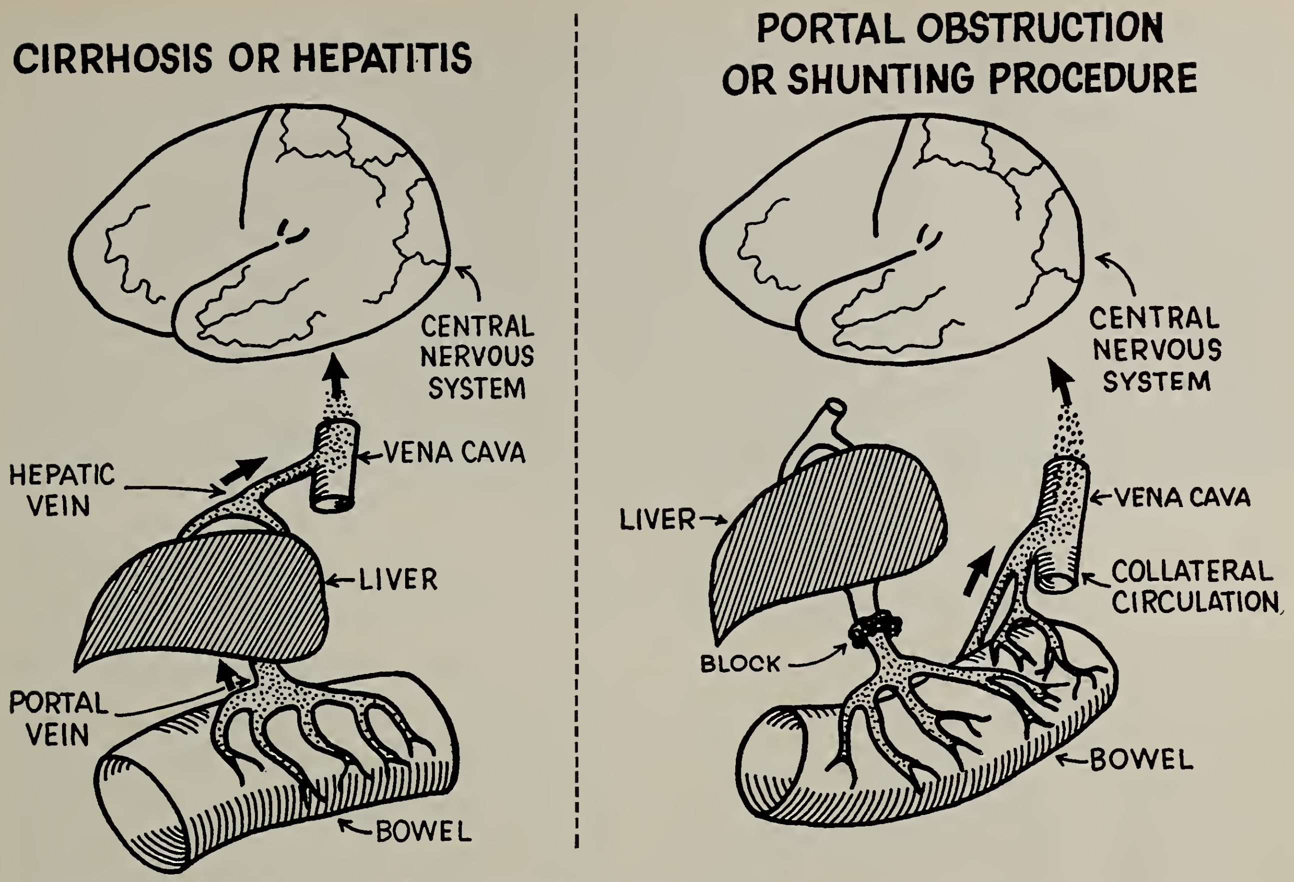

Figure 1.—*Left:* Portal flow normal but liver unable to detoxify or synthesize. In this type toxic amino acids from bowel, bilirubin, ammonia and abnormal amounts of porphyrins, iron and copper, as well as breakdown products from the liver, may reach the brain. Hepatic vein ammonia concentration may be higher than in portal vein.

Right: Liver function may be relatively good but portal flow blocked or shunted directly into systemic circuit. Ammonia from protein breakdown in bowel reaches brain in high concentration and liver may not receive basic material for essential enzyme or amino acid synthesis.

In either case, the permeability of the hematoencephalic barrier may be increased.

of medicine—the surgeon who has tried to ameliorate portal hypertension by means of a portacaval shunt, the internist who must treat chronic liver disease on the wards, the neurologist and psychiatrist who see the patient because of bizarre motor and behavior disorders (Figure 1).

The clinical features of hepatocerebral dysfunction find expression in both motor and mental changes of varying degrees. Unfortunately, one of the first manifestations attributed in humans to this sort of liver disease was coma, and for this reason the term "hepatic coma" came into wide use. Now there is no good term to describe the lesser degrees of affliction which may long precede the actual loss of consciousness. Perhaps the older term *cholemia* would do.

Cholemia has been extensively studied from a clinical as well as from a laboratory point of view and it now appears that one must consider everything from the most subtle of personality changes to gross confusion, from minor unsteadiness to severe ataxia, from slight tremulousness to coarse flapping of the extremities. The clinical picture is quite variable in the same patient at different times. For instance, long after the acute liver disease has subsided or long after the precipitating agent has started the train of events, the impairment of cerebral function, while showing exacerbations and remissions, is slowly and steadily progressive. In some patients neurological abnormalities may vary from day to day, or even from hour to hour, and this fact may indicate that the neurological disorder is not the result of a single simple biochemical abnormality but is the product of many complex variables. Frerichs[7] pointed out that with acute yellow atrophy of the liver one saw acute mania and convulsions, while with chronic cirrhosis the pattern was one of quiet disorganization progressing to coma. It seems as though the condition might almost be self-perpetuating, since the progress is so relentless after the initial insult. In milder cases (or at least in cases of the more slowly progressing type) the first symptoms may be recurrent nightmares, aimless wanderings, loss of interest and drive, or even various psychotic manifestations. Often the patient seems alert and clear in the morn-

TABLE 1.—*Hepatocerebral Relations*

HEREDOFAMILIAL TYPES

(1) Hepatolenticular degeneration (Wilson's disease)

(2) Pseudosclerosis of Westphal and Strumpell

Tend to begin fairly early in life, characterized by progressive dementia and motor disorders. Intention tremor severe and motor activity does not cease at rest, though disappears during sleep. Kaiser-Fleischer ring present often in moth types.

Chemical abnormalities consist of deficient formation of caeruloplasmin, decreased copper binding ability of serum, abnormal excretion of copper and alpha amino acids in no particular pattern. Kaiser-Fleischer ring contains copper, basal ganglia contain from four to fifteen times normal amounts of copper. Excretion of copper aided by B.A.L. Kaiser-Fleischer ring may blanch and patient may improve clinically.

ACQUIRED TYPES

(1) Secondary to intrinsic hepatic disease:
  (a) Cirrhosis:
    (1) Alcoholic
    (2) Dietary
    (3) Postinflammatory (hepatitis)
    (4) Toxic (hydrocarbons or halogenated compounds)

(2) Secondary to extrahepatic block or shunt:
  (a) Surgical:
    (1) Eck fistula
    (2) Portacaval anastomosis in humans
  (b) Nonsurgical:
    (1) Carcinoma of pancreas
    (2) Local metastases
    (3) Thrombosis of portal vein

POSSIBLE INTERMEDIATE CONDITIONS

(1) Copper poisoning
(2) Manganese poisoning
(3) Neurological changes in patients with chronic liver disease given NH_4 by mouth

ing, only to become confused later in the day. These changes occur long before jaundice or other overt signs of liver failure appear, and may be quite misleading. Another characteristic feature is a disorder of movement. This may take the form of mild ataxia or tremor at first, and may closely mimic cerebellar or basal ganglia disease. Close observation of the motor difficulty reveals that this too is quite intermittent and variable. One sees peculiar intermittent short movements like chorea, fluctuating rigidity, occasional flapping movements of the laterally held arms, and later, grimacing, sucking, reflex grasping, picking at the bed clothes. The muscle stretch reflexes are often increased for an hour or so, only to be normal at other times. Extensor toe signs are often noted and even convulsions may occur. Curiously, the neck is frequently stiff, making the diagnosis even more difficult. Once deep coma supervenes, the prognosis is poor for survival over two weeks.

An alert physician can be warned of impending hepatocerebral failure by the patient's description of curious visual hallucinations, slight changes in psychomotor activity, sudden onset of sphincter incontinence or stereotyped behavior. Another early complaint may be increased salivation, or a strange metallic taste in the mouth. Mild confusion is certainly a warning sign and it is important to recognize the difficulty, since administration of sedatives, especially barbiturates, may quickly precipitate fatal coma. As examples of the peculiar signs and symptoms observed in these patients, I might mention the patient with known liver failure who was found drinking his own urine, and another patient with "Banti's syndrome" who after a splenectomy began to do such things as putting her own child to bed on the ironing board and then forgetting about him. Because of the episodic behavior in the latter case, the patient was thought to have "psychomotor" seizures. Another case was seen in a man who had been deer hunting and who had eaten large quantities of venison. He was found in deep coma by his hunting partner on the next day.

Convulsions of all types may be seen in the same patient at different hours of the day, or one may note muscle twitchings closely resembling those of hypocalcemia or uremia. When the patient can cooperate and can hold his arms laterally the fingers are often seen to deviate laterally, to flex at the metacarpophalangeal joints while the wrist makes similar motions. With the patient supine and the leg elevated, sudden flexion at the hip or ankle, followed by slow return, may be observed. Similar movements may be seen in a protruded tongue or at the corners of the mouth; but one of the most interesting features, and one which seems to differentiate this condition from Wilson's disease, is that all the motions cease at rest and promptly disappear with the onset of coma. If the patient survives the coma, the movements may then reappear and remain for months or years. The limbs may be rigid and the face may show a "Parkinsonian" attitude. In one patient the dysarthria was so pronounced as to resemble that of acute alcoholic intoxication. The diagnosis was only suspected when, on getting close enough to the patient to examine eye grounds, the examiner noted a characteristic fetor hepaticus. This last feature, although frequently mentioned, is very difficult to describe. Perhaps the odor is comparable to that of decaying cantaloupe.

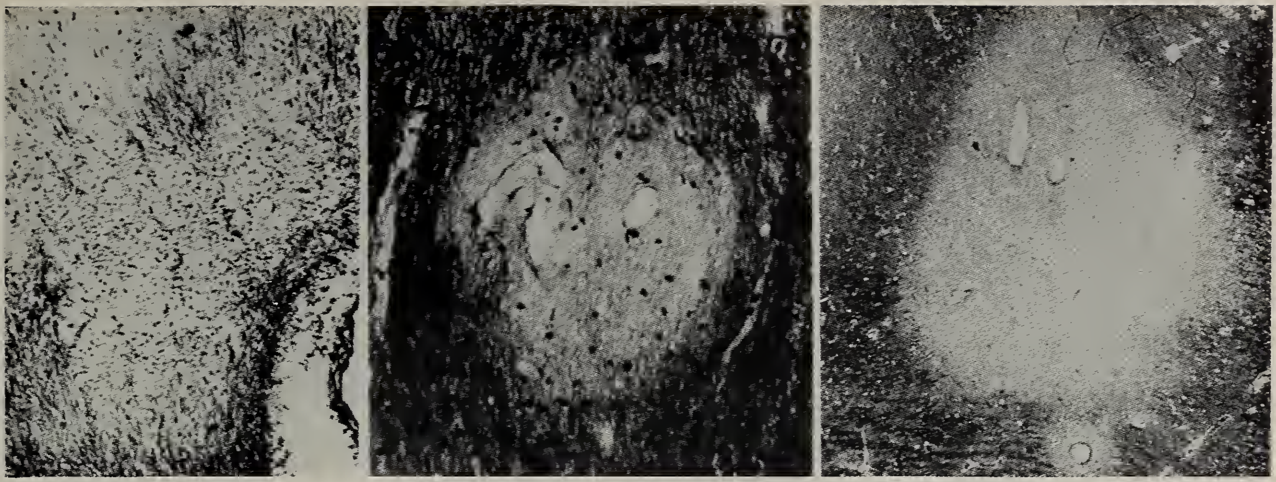

Figure 2.—*Left:* This is a large area of diffuse demyelination in brain tissue in a patient with uremia. There is a partial breakdown of the tissue resulting in some fragmentation. Weil stain. (×40.) *Center:* This small vessel shows a typical area of focal demyelination involving the white matter associated with hepatic disease. Weil stain. (×75.) *Right:* This is a large, sclerotic plaque situated within the brain of a patient with multiple sclerosis. There is a sharp demarcation between the injured and intact brain tissue. Note perivascular involvement. Azocarmine stain. (×40.)

This, then, is the clinical picture that results when a damaged liver affects the central nervous system. It is not precisely the same as the syndrome seen with familial liver and brain afflictions, and while the neurological manifestations of Wilson's disease are almost always accompanied by portal cirrhosis, hepatic coma or any of the other conditions mentioned above may result from a great variety of liver disorders (Table 1).

Unfortunately, neuropathologic examination adds very little to our understanding of either the familial or the acquired hepatocerebral syndrome. The astrocytic changes of Alzheimer, formerly thought specific for pseudosclerosis, and the neuronal changes seen in Wilson's disease are also found in patients dying with severe liver disease as well as in many other conditions. It is noteworthy, however, that the large multilobulated astrocytes described by Alzheimer are much more frequent in hepatocerebral disorders than they are in other conditions, but it is obviously difficult to explain the dementia and disorders of movement on the basis of glial changes of any sort. After fatal liver disease small areas of perivascular demyelination are often found in the brain, but these are quite indistinguishable from the changes seen, for example, in chronic uremia or recurrent hypoglycemia, and are not unlike the early changes of the primary demyelinating diseases (Figure 2). Neuronal changes are widespread in both the acquired and familial types of hepatocerebral disorder, and are quite nonspecific.

The biochemical approach to the problem was provided in 1858 by Frerichs[7] in a masterful analysis of clinical cases published in his treatise on liver diseases. He noted neurological manifestations in all cases of acute yellow atrophy and felt that hypoglycemia was the chief difficulty. He showed that bile itself was not responsible by giving the substance to dogs intravenously without producing neurologic symptoms. Later, when the Eck fistula was in use the animals were found to develop cerebral symptoms ("meat intoxication") on high protein diets. Attempts to produce the neurological symptoms by means of partial hepatectomy were inconclusive. In the 1920's manganese salts[5] had been found to damage both liver and brain, but no connection has since been established between manganese and the clinical syndromes associated with liver disease. More recently the administration of ammonium (NH_4) salts to people with severe liver disease has been found to produce neurological symptoms.[16]

The cumulative result of all these studies was that several schools of thought developed regarding the causes of the neurological disorder. In brief, one school believes that the difficulty arises from absorption of intestinal "toxins" which are allowed to bypass a damaged liver. Another theory is that the dying liver cells elaborate a neurotoxin. Still another group is of the opinion that the changes in the permeability of the hematoencephalic barrier play a dominant role; and lastly there is some evidence suggesting that the whole syndrome arises because of some changes in the metabolism of various dietary constituents after liver damage.

The derangement of nitrogen metabolism has received intensive study. Many investigators have concluded that because the ammonium ion is a toxic by-product of certain cerebral reactions and because the blood levels of ammonia may be elevated in severe liver disease, the problem is essentially one of ammonia intoxication.[10,16] The fact that many other observers find no consistent correlation between cerebral symptomatology and blood ammonia levels indicates that the problem may be more extensive. Against the theory of ammonia intoxication the following observations may be cited: (1) First, venous samples are grossly inadequate since the muscles take up the majority of circulating ammonia, depending upon the arterial concentration.[1] (2) The venous blood ammonia levels do not correlate directly with the neurologic manifestations and, in fact, may be quite normal in deep coma. Likewise, slight elevations of ammonia may be associated with severe central nervous system symptoms. (3) The cerebral arterio-venous ammonia difference may be increased in hepatic coma, indicating that the central nervous system is taking up more of the compound than usual.[1] It seems unlikely that the brain would take up a neurotoxic agent in such quantities unless it were doing so as a secondary, or defense, reaction to some other chemical imbalance. (4) Very high blood ammonia levels have been produced without any neurological signs or symptoms.[19] (5) A concentration of ammonia much higher than any ever found in hepatic coma does not alter brain slice metabolism, while the same concentrations inhibit liver respirations by 20 per cent.[3] (6) Administration of ammonium salts or high protein diets may not produce neurological signs for several days, although the amount of ammonia in the blood goes up early.

This brief mention of a few isolated facts on the subject certainly does little justice to the tremendous amount of work that has been done, but space does not permit detailed arguments and there are other studies which deserve mention.

Another possible cause for the cerebral dysfunction might be found in the metabolism of the alpha amino acids. From the wealth of data pertaining to these compounds the most important facts to emerge are that: (1) Glutamine$\rightleftharpoons$glutamic acid$\rightleftharpoons$alpha ketoglutaric acid$+NH_3$. (2) Methionine is a potent inhibitor of the foregoing conversion from glutamic acid to glutamine.[22] (3) Glutamic acid and methionine are both elevated in the serum of patients with acquired liver disease and both, because of their anti-metabolic effects on glutamine, are capable of producing severe metabolic disturbances within the central nervous system.[23] (4) Administration of methionine in both acute and chronic liver disorders may precipitate coma quite as dramatically as any of the other agents that have been implicated. (5) Deranged metabolism of methionine in the liver itself may lead to the increase in circulating ammonia.[18]

Disturbances in copper metabolism are also common to both the familial and acquired types of hepatocerebral disorders. In acquired liver disease the hepatic concentration of copper may be greatly increased. In 1920 it was found that the administration of copper produced cirrhosis, and in 1930 copper deficiency in animals was found to result in ataxia and demyelination of the cord. Later it was found in humans that gross cavitation of the brain may occur with acute copper poisoning.[3] In patients dying of hepatic coma the copper content of the basal ganglia is said to be significantly elevated, as it is in Wilson's disease. It has been stated by previous observers that in cholemia, unlike Wilson's disease, copper excretion is not elevated; but in one of the cases observed by the author the urinary excretion of copper was four times normal in 24 hours. One cannot clearly indict copper as the sole cause of the neurological manifestations, however, since copper has a reciprocal relationship with iron and may act by displacing something else.

Since the features of hemochromatosis may be quite like those of Wilson's disease, one must consider also the possible role of iron in hepatocerebral dysfunction. Intravenous iron preparations in humans have caused both coma and seizures[3]; in hemochromatosis the deposition of hemosiderin leads to pronounced changes in both glia and neurones; and in hepatitis the serum iron is elevated.

Carbohydrate metabolism, the main source of energy for the central nervous system, is decidedly affected by liver disease. Depletion of the four carbon acids within the neurones cannot be easily corrected in liver disease because of lack of essential vitamins and enzymes manufactured by the liver. Since some brain glycolysis is anaerobic, lactic acid is a by-product. In liver disease the lactic acid levels which may develop are easily neurotoxic.

Abnormalities in porphyrin metabolism, well known in liver disease, may also play a part in hepatocerebral disorders of all types, since oxygen is brought to the brain not only by hemoglobin but also by cytochrome, an iron-containing porphyrin. Certain types of porphyrins are certainly very toxic to the central nervous system, but others are essential; and in one of the cases observed by the author the porphyrin output was depressed during coma but rose during lucid intervals.[15]

Another interesting possibility in both acquired and hereditary hepatocerebral disorders is that in neither is the blood brain barrier operating normally. Himwich[8] showed that hepatectomy considerably increased the permeability and that brain changes may result from admission of normal metabolites that are usually kept out. Injecting liver extract restores the situation to normal for a time.

A recent study indicated that a damaged liver may not supply certain essentials for the maintenance of normal brain function. It has been shown that the brain requires a certain amount of serotonin and since the liver is responsible for the conversion and transport of certain serotonin precursors, the brain may suffer after liver damage by virtue of an actual metabolic deficiency, rather than an excess of some circulating substance.[2]

These brief references to the vast amount of work pertaining to hepatocerebral dysfunction will certainly not provide a suitable answer to the problem. A review of essential data, however, may facilitate the management of patients with such conditions. The patient with known cardiac decompensation and liver congestion who seems to become confused after the administration of ammonium chloride or ammonium-containing resins will certainly not be treated with barbiturates or other sedatives if the possibility of an incipient hepatic coma is borne in mind. Likewise, the patient with known portal hypertension who has been treated surgically with portacaval anastomosis will certainly not be given a high protein diet or narcotics postoperatively. Whereas the so-called "lipotropic" agents such as methionine used to be given frequently in certain inflammatory liver diseases, the contraindications to the use of these drugs will now be obvious. When a patient with known esophageal varices is suddenly found near coma with a flapping tremor of the extremities and fetor hepaticus, it will be easy to see why removal of the large amount of blood from the ruptured varix will correct the tendency for large amounts of nitrogenous material to be absorbed from the gastrointestinal tract. Sometimes a cleansing enema in these patients is dramatically restorative. Lastly, a patient in whom affective or behavior disorders develop after hepatitis may not respond as well to psychotherapy as he will to changes in diet or other medical measures.

Once cholemia has been diagnosed and is seen to be far advanced, there is frequently little that can be done. However, the administration of antibiotics to remove the urea-splitting organisms from the gastrointestinal tract, the administration of large amounts of the water-soluble vitamins, the scrupulous maintenance of fluid and electrolyte balance, and the administration of such agents as glutamic acid or arginine may be of some help. The clinical syndrome seems to be reversible in a fair number of cases, provided the pathologic condition in the liver is not neoplastic or rapidly progressive. In a rare case it might be possible to use the artificial kidney to dialyze the patient's blood, as is done in certain acute toxic nephropathies.

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Endothelial Cells in Blood Smears

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• Smears of blood obtained by venipuncture sometimes contain odd looking cells which occur singly and in sheets. Their presence may suggest a possible diagnosis of infectious mononucleosis, leukemia, or even malignant disease. Actually, they are endothelial cells from the lining of blood vessels. Use of a barbed needle for venipuncture is the cause of such artifacts.

THE CHANCE OCCURRENCE of endothelial cells in blood smears may give rise to erroneous diagnosis. Appearing singly, these cells may simulate abnormal monocytoid cells of infectious mononucleosis, acute lymphocytic leukemia or monocytic leukemia. Appearing in sheets, they may simulate metastasizing malignant cells. The purpose of this communication is to emphasize the necessity for recognizing these cells.

Recently we examined a smear made from antecubital venous blood drawn from a patient who was convalescing from an abdominal-perineal resection for adenocarcinoma of the rectosigmoid colon. (The surgical specimen showed neoplastic invasion to the serosal surface but no extension to the surgical margins, no involvement of lymph nodes and no invasion of blood vessels.) The blood smear contained large numbers of unusual cells occurring singly and in sheets (Figures 1 and 2). These cells varied from 20 to 30 micra in size, were elongate, tended to be polygonal in outline and had more or less distinct borders. With Wright's stain the cytoplasm was pale blue and occasionally contained fine granules or clear vacuoles. The nuclei were red-purple, oval, and varied in size from 12 to 18 micra. The chromatin net was moderately coarse, and from one to three pale blue nucleoli were present. Cells of this description were found only in the one smear; none were seen in subsequent preparations.

These cells were thought to be of endothelial origin and to derive from the site of venipuncture. However, it was tempting to assume that they represented metastatic tumor, although the passage of sheets as large as these through capillary beds seemed unlikely. For comparison, touch preparations of vein endothelium obtained at a necropsy were stained by Wright's method. Cells identical with those in the blood smear were found in large numbers (Figure 3).

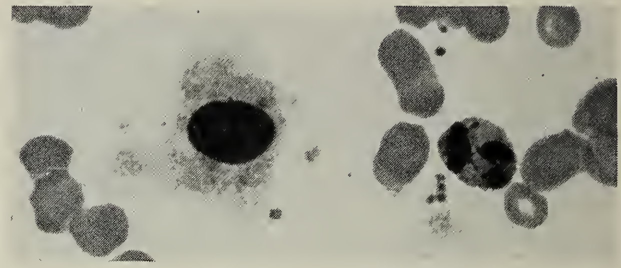

Figure 1.—Single endothelial cell (×690).

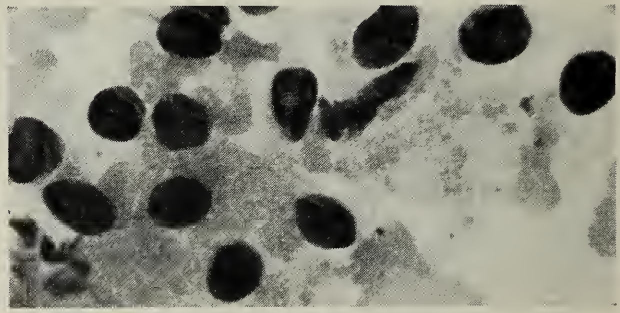

Figure 2.—Sheet of endothelial cells (×690).

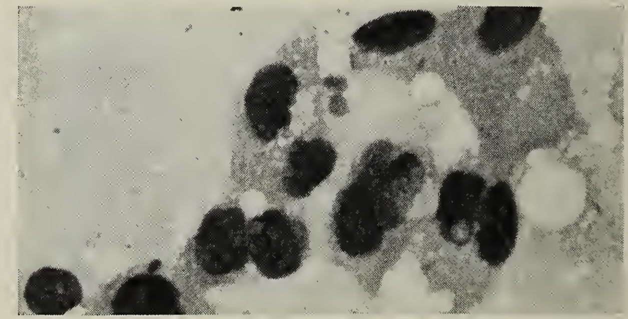

Figure 3.—Touch preparation of vein endothelium from necropsy (×690).

Shanberge[1] reported similar experience with endothelial cells accidentally appearing in blood smears and gave convincing evidence that they may occur incident to the use of barbed needles for venipuncture.

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Laboratory Diagnosis of Typhoid Fever

With Notes on Treatment

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• As indicated by a study of 41 cases of typhoid fever treated in three years, blood culture alone is often sufficient for the diagnosis of the disease if a large (30 cc.) specimen is used. Demonstration of the organism is the only completely diagnostic measure, but this was also achieved by the Widal reaction, by fecal or urine culture, or by aspirated bile culture, which in one case gave the only positive response.

Chloramphenicol is the drug of choice in treating typhoid fever. Since only 25 per cent of patients develop immunity, immunizing injections should be started a week after therapy is discontinued.

TYPHOID FEVER is so rare in most large cities of the United States, where medical teaching is centered, that many physicians complete their internship and residency training without ever having seen a case of the disease. They are therefore not "typhoid-conscious" and do not consider this possibility in differential diagnosis. At the Los Angeles County General Hospital there are about 15 cases a year. Most of these are incurred abroad, for although the United States Public Health Service advises immunization against many other diseases for citizens leaving the country, typhoid fever immunization is regrettably not included.

Clinical signs and symptoms of typhoid fever have been described many times and are helpful in diagnosis, but the purpose of this presentation is to emphasize that even when these findings are typical, the only measure which establishes the diagnosis is the isolation of the infecting organism from the blood. Usually it is present in the blood during the first week, but experience of 35 years indicates that some degree of bacteremia persists from onset to final defervescence. As the factors of immunity come into play, more particularly in the second week, the reticuloendothelial fixed-tissue phagocytes are stimulated to a maximum, and the spleen and liver (which become perceptibly enlarged) take up large numbers of the bacteria; therefore fewer and fewer are present in the blood. This sequence of events must be taken into consideration in obtaining a positive response to blood culture.

It is unusual for the Widal agglutination test to give a positive response before the second week. In the author's experience the positive response may be delayed until the sixteenth week and in many cases it is never obtained, as this presentation reports.

The following resume of 41 cases of typhoid fever, observed at the Los Angeles County General Hospital between June 1, 1953, and May 15, 1956, exemplifies the diagnostic laboratory methods employed in the communicable disease unit of the hospital:*

Blood Culture: Approximately 10 cc. of blood is added aseptically to 100 cc. of tryptose phosphate broth and a second 10 cc. of blood to 100 cc. of bile broth. If no growth occurs in either medium, a second culture is made of 30 cc. of blood added to 300 cc. of bile broth. If growth of Gram-negative bacilli occurs, the organisms are tested for motility and identified biochemically. Specific antisera are used for final identification; the organisms being tested against Kauffmann-White Group D, flagellar H and Vi antisera. When agglutination is produced, the organism is identified as *S. typhosa.* Since there are far fewer bacteria in the blood after the first week of the disease, the use of larger (30 cc.) blood specimens is logical, and is validated by the high frequency of positive response—29 out of 41 cases, in the present series, a higher proportion of diagnosis than was obtained by any other method.

Fecal Culture: Rectal swabs are placed in sterile normal saline solution. About 1 gram of feces is suspended in 5 cc. of saline solution. A loopful of the resulting suspension from each is then streaked on Shigella-Salmonella agar. Nonlactose-fermenting colonies are identified as described under blood culture.

Urine Culture: After the second week, should the disease run that long under modern therapy, it is quite common to find typhoid bacilli present in the urine. In such cases, approximately 10 cc. of urine is centrifuged at 3,000 revolutions per minute for 15 minutes and the resulting sediment is cultured

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*All laboratory procedures are done under the direction of Jean W. Dedrick, Ph.D., director of the communicable disease laboratory.

TABLE 1.—*Diagnostic Criteria in 41 Cases of Typhoid Fever*

Diagnostic Tests	Number Positive	Basis of Diagnosis
Blood culture	6	On blood culture alone. Widal reaction was negative.
Widal reaction	4	On this reaction alone.
Widal reaction and blood culture	20	Based on the two tests alone.
Stool culture and blood culture or Widal reaction (or both)	18	Only in one case was the diagnosis made by fecal culture alone.
Bile culture	5	In one case, there was no other diagnostic response.
Urine culture	2	Both cases also diagnosed by blood culture and Widal reaction.

on Shigella-Salmonella and eosin-methylene blue agar and in tryptose broth. Nonlactose fermenters are identified as above.

Widal Reaction: The patient's serum is inactivated at 56°C. for 30 minutes. Twofold serial dilutions of serum ranging from 1:40 to 1:5,120 are then made in normal saline solution in 0.5 cc. amounts. Then 0.5 cc. of antigen is added to each tube, giving final dilutions of 1:80 through 1:10,240. A control tube containing 0.5 cc. of saline solution and 0.5 cc. of antigen is included. The tubes are then incubated at 37°C. for 20 minutes, centrifuged at 2,000 r.p.m. for ten minutes, and read for agglutination. The last dilution in each agglutination which occurs is reported as the titer. The antigen is the typhoid "H" antigen and is supplied by the California State Department of Public Health Division of Laboratories.

In regard to the Widal test, it should be remembered that in some cases of typhoid fever, "H" (flagellar) agglutinins do not develop in the blood, while "O" (somatic) agglutinins may be present in relatively high titer. Also, the proportion of cases in which "O" agglutinins develop is much higher (we do not know why) in some communities than in others. Felix and Pitt[1] explained why many virulent strains of typhoid fever do not agglutinate with an "O" antigen: They demonstrated the presence of another special antigen, the "Vi" antigen, as Felix named it. Because the "Vi" antigen is heat-labile, Widal tests cannot detect it unless made with living suspensions of the typhoid organism at 37°C. It is destroyed by being heated to 60°C. for one-half hour, or 100°C. for five minutes. Weak solutions of phenol also destroy it. The presence in a patient's blood of the "Vi" antigen is generally considered *prima facie* evidence of the presence of typhoid fever, whereas the presence of "O" and the "H" antigens may be due to previous vaccination against typhoid fever, to anamnestic reactions or to the Hektoen phenomenon when actually typhoid fever is absent.

The Hektoen phenomenon is one in which a disease other than typhoid fever gives rise to a heightened Widal reaction against ordinary typhoid antigens, the specific agglutination being higher, however, against the organism causing the other disease than it is against typhoid fever.

DISCUSSION

Of the 41 cases covered by this report, the diagnosis in six was made on the basis of blood culture alone, no Widal reaction being evoked (Table 1). Only four were diagnosed on the basis of the Widal reaction alone. In 20 cases, both tests gave a positive response. Fecal culture was the only positive test finding in a single case; in 18 others, it was confirmed by blood culture or Widal reaction or both. The same was true of aspirated bile culture, which gave the only positive response in one case and was confirmed by other tests in five others. Positive urine culture in two cases was otherwise confirmed in both.

NOTES ON TREATMENT

At present, one drug stands out above all others in the treatment of typhoid fever—chloramphenicol. The dosage is most important: In each 24-hour period, 65 mg. per kilogram of body weight for an adult patient and 120 mg. per kilogram for a child. Cures have been reported with smaller doses for children, according to Young's rule, but I have been unable to duplicate these results. In my experience, without the larger dosage for children the disease runs its usual course.

Although chloramphenicol has been incriminated as the cause of malignant neutropenia in some persons, it appears to contribute only rarely to that suppression of hemopoiesis which frequently occurs in typhoid fever and gives rise to leukopenia.

Other drugs have been mentioned in the literature as equally efficient, but the fact that they are neither available nor discussed any longer in the literature makes one doubt their efficacy. At any rate, chloramphenicol is the drug of choice at this moment. It apparently is not bactericidal but bacteriostatic, and one-fourth of all patients in whom the disease has been brought under control and who have become defervescent by the use of chloramphenicol, will have typhoid fever again at a later date, varying from a few weeks to several months, unless they are vaccinated with typhoid vaccine after they apparently have been cured by chloramphenicol. This drug definitely interferes with the function of immunity.

It has become fashionable to add steroids, particularly cortisone, to the treatment of typhoid fever. Since these drugs also interfere with the mechanism of immunity, it is not wise to employ them routinely in the treatment of typhoid fever when chloramphenicol alone is so efficient.

The temperature and the course of the disease are usually halted within five days after chloramphenicol therapy is begun. However, when this therapy is started late, it will not prevent the usual complications or sequelae, such as hemorrhage or perforation.

At the conclusion of typhoid therapy, because 25 per cent of patients have not developed immunity, I usually allow patients to remain without treatment for five days to a week and then immunize them with killed typhoid vaccine. From experience, I believe that vaccination is more efficient in the prevention of typhoid recurrences or relapses if the three-dose method of immunization used by the armed services is employed; namely, the use of 500 million killed typhoid organisms for the first vaccine dose, and one billion at each of the two succeeding doses, each given a week apart. At present, there is a tendency to make all three doses the same, each containing only 500 million organisms. The stronger doses, in my opinion, will prevent some of the relapses that still occur while vaccination is being carried out or immediately thereafter.

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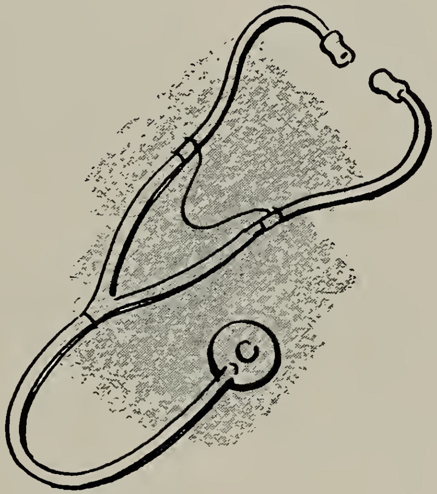

Child Pedestrian Fatalities in Los Angeles

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• In an analysis of information concerning 81 child pedestrians killed in traffic accidents in the city of Los Angeles during a recent five-year period it was observed that the majority of children were preschoolers playing near their residences but without adult supervision. In most instances the action of the child and not the driver of the vehicle was responsible for the accident. Among school age child fatalities, improper handling of a bicycle was commonly to blame.

THE PROBLEM of childhood accidents, although receiving increased attention, is far from solved. In a recent period of one year, admissions due to accidents made up 16 per cent of all admissions to the pediatric wards of a general hospital in Los Angeles. Most of these children had been injured in traffic accidents.

A particularly tragic group of traffic accidents is composed of injuries to child pedestrians. With an eye toward development of better preventive methods, the Bureau of Maternal and Child Health of the Health Department of the State of California decided to investigate this particular problem.

With the cooperation of the Traffic Services Division of the Los Angeles City Police Department and the Coroner's Office of Los Angeles County, a survey was undertaken of the case histories of child pedestrians who died in traffic accidents within Los Angeles City limits during the years 1952 through 1955. During this four-year period there were 12,902 pedestrians of all ages involved in traffic accidents, of which 4 per cent or 563 ended fatally.[1] Eighty-five of those who died were children aged 14 years and under (see Table 1).

Case records of 81 of the 85 child pedestrians (bicyclists also included) obtained from the police files were reviewed in an attempt to clarify the circumstances of the accidents. Data available from the records included information obtained by the investigating police officer at the scene of the accident, with statements of the participants and witnesses, a scaled diagram of the location, a description of pedestrian action, driver action, driver violation, sobriety of driver, traffic control, weather, lighting, vehicle condition, vision obscurement and character of the road. Also included was the result of the coroner's inquest, if any, with the decision of the coroner's jury as to whether the driver of the car was believed to be criminally responsible, and a statement as to the final disposition of the case.

Age of Victims

The problem of child pedestrian fatalities appears to be largely concerned with preschool and early elementary school-aged children. There were over twice as many fatalities in the group age 6 years and under as in the group 7 to 14 years of age. Fifteen of the older age group were bicyclists.

TABLE 1.—*Pedestrian Accidents in Los Angeles City*

	1952	1953	1954	1955	Totals
Injured—all ages	3,285	3,317	3,133	3,167	12,902
Deaths—all ages	140	128	142	153	563
Deaths—0 to 14 years	25	14	26	20	85
Bicycle rider deaths—(0 to 14 years)	3	2	5	5	15

TABLE 2.—*Kind of District in Which Traffic Accidents Fatal to Pedestrian Children Occurred*

		No. Cases
Residential		53
Business—shopping		18
Industry—manufacturing		2
Country		4
School		1
Multiple dwelling		1
Other		2
Total		81
Parking lot	3	
Sidewalk, yard or driveway	9	
Total	12	

Sex of Victims

Boys were involved in fatal accidents almost twice as frequently as girls, a fact which is in agreement with data observed in other surveys.

Type of District

Fifty-three fatal accidents occurred in residential areas as compared with 20 in business, shopping and industrial areas (Table 2). Only one death occurred

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Submitted October 30, 1957.

TABLE 3.—*Time of Day Traffic Accidents Fatal to Pedestrian Children Occurred*

Light	No. Cases	Dark	No. Cases
8 a.m.	5	5 p.m.	4
9 a.m.	1	6 p.m.	5
10 a.m.	7	7 p.m.	4
11 a.m.	3	8 p.m.	2
Noon	5	9 p.m.	1
1 p.m.	4	10 p.m.	0
2 p.m.	10	11 p.m.	1
3 p.m.	14		—
4 p.m.	4	Total	17
5 p.m.	11		
	—		
Total	64		

TABLE 4.—*Data on Supervision of Pedestrian Children Killed in Traffic Accidents*

	No. Cases	
Alone	35	(17 were under 5 years)
With parent(s)	15	
With other adult	5	
With other children	25	

TABLE 5.—*Primary Cause of Vehicular Accidents in Which Pedestrian Children Were Killed*

	No. Cases
Driver action:	
Reckless or inexpert driving	7
Excessive speed	4
Backing carelessly	4
Defective vehicle	3
Violation of pedestrian right of way	3
Runaway vehicle	2
	—
Total	23
Pedestrian action:	
Running into street	26
Crossing carelessly	9
Playing in street	5
Riding bike carelessly	11
	—
Total	51

TABLE 6.—*Data on Age, Sex and Responsibility of Driver in Cases of Pedestrian Children Killed in Vehicular Accidents*

Age of Driver	Male	Female	Criminally Responsible
0 to 10 years	2	....	....
11 to 20 years	10	1	2
21 to 30 years	19	6	3
31 to 40 years	17	6	2
41 to 50 years	9	....	1
51 to 60 years	5	2	1
61 to 70 years	3	1	2
	—	—	—
Totals	65	16	11

in the vicinity of a school, the area in which there is the greatest concentration of children during certain periods of the day. Twelve children were killed in areas which might normally be thought to afford some protection—for example, sidewalks, yards or driveways.

Time of Day

The majority of accidents occurred during the daylight hours when children are most likely to be at risk on the street (Table 3).

Supervision of Child

From an analysis of the witness reports, it was possible to determine who was with the child at the time of the accident. Thirty-five of the children, 17 of them in the age group 1 to 4 years, were believed to have been alone at the time of the accident. Twenty children were with their parents or another adult and 25 were with other children (Table 4).

Primary Cause of Accident

It was possible on the basis of the police reports to divide the accidents roughly into two types—one in which the action of the driver was primarily responsible for the fatality, and another in which the pedestrian action was primarily responsible (Table 5). In only 23 of the 81 cases was the driver responsible. Reckless or inexpert driving, excessive speed, backing carelessly, defective vehicle and violation of pedestrian right-of-way in a cross-walk were primary causes of only a small group of fatalities. The child was at fault in the majority of accidents, either running into the street (often darting from between parked cars), crossing carelessly, playing in the street or riding a bicycle carelessly. It was of interest that in every instance of a bicycle fatality the child was at fault, either due to inexpert handling of the bicycle, "riding double," not stopping at a boulevard stop or speeding out of an alley onto a busy street.

Information Concerning the Drivers

Most of the drivers of vehicles involved in fatal child pedestrian accidents were young people (Table 6). They were in their teens, twenties, and thirties—at an age when reflexes and visual acuity might be expected to be at the optimum. There were three children drivers under the legal age limit even for learner's permits. One 13-year-old girl struck and killed a child while driving her mother to the market. She habitually drove the family car because the mother was not able to get a driver's license. Another 8-year-old struck and killed his own brother while being instructed by his father in the handling of a car. In only one case was there a statement that the driver had been drinking and was under the influence of alcohol. The fact that there were 65 male

TABLE 7.—*Data on Type of Vehicle Involved in Accidents Fatal to Pedestrian Children*

	No. Cases
Passenger car	62
Truck	17
Bus	1
Motorcycle	1
Total	81

drivers and 16 female drivers involved in fatal pedestrian accidents can only be interpreted in the light of the proportionately greater total number of male driving hours.

In the opinion of the investigating police officers and the coroner's jury, only 11 drivers were held criminally responsible and therefore subject to legal prosecution for felony or misdemeanor. In ten additional cases the driver was primarily at fault but circumstances were such that no definite legal action was indicated.

Type of Vehicle

Most of the vehicles were postwar passenger cars in relatively good operating condition. Three cars, however, had defective brakes or defective steering gear, and one of these was a typical "hot rod." Seventeen were trucks, of which approximately half were delivery trucks being driven in residential areas (Table 7).

Reactions of Driver

Statements of the drivers and witnesses were reviewed to determine the reactions of the driver (Table 8). Half of the drivers saw the children but were unable to stop before hitting them. In 33 instances the drivers did not see the children at any time but were aware of a thumping sensation. One driver thought that he had run over a box in the road and would have continued on his way without stopping except that a passenger riding in his car looked back and saw the injured child. Three drivers left the scene of the accident without being aware that anything had happened and would have been considered as hit-and-run drivers had they not been flagged down by witnesses and then immediately returned to render assistance. There were three actual hit-and-run drivers, two of whom were apprehended later by the police.

Relationship to Vehicle Speed

From the statements of the drivers and the witnesses, an approximation of the vehicle speed immediately preceding the accident was obtained. In some cases, measurement of skid marks, examination of brakes and other methods were employed by the police department to estimate vehicle speed. It can be seen in Table 9 that most of the vehicles were moving at a speed of under 30 miles an hour at the time of the accident.

TABLE 8.—*Reactions of Driver in Accidents Fatal to Pedestrian Children*

	No. Cases
Saw child but could not stop	42
Didn't see child, felt thump	30
Didn't know had hit child	3
Hit-and-run	3
Miscellaneous	3
Total	81

TABLE 9.—*Vehicle Speed in Accidents Fatal to Pedestrian Children*

Vehicle Speeds (Miles per Hour)	No. of Vehicles
0 to 10	25
11 to 20	19
21 to 30	17
31 to 40	9
41 to 50	5
51 to 60	1
	76

TABLE 10.—*Time of Death, After Accident, of Children Fatally Injured by Vehicles*

	No. Cases
Died immediately	17
Survival time of others:	
0 to 1 hour	31
1 to 8 hours	20
8 to 24 hours	9
1 to 7 days	3
Over 7 days	1
Total	81

Survival Following the Accident

Forty-eight of the 81 children died either instantly or within an hour after the accident, and therefore before adequate definitive medical and surgical treatment could be started. Twenty children lived from one to eight hours after injury. Nine lived from eight to 24 hours and only four children for more than 24 hours (see Table 10).

Cause of Death

The results of the coroner's investigations revealed that cerebral injury was the cause of death in 45 of the cases; cervical cord injury in three of the cases; crushing injuries of the chest in three and of the abdomen in nine. Multiple injuries were listed as the cause of death in 21 cases (see Table 11).

TABLE 11.—*Cause of Death in Vehicular Accidents Fatal to Pedestrian Children*

	No. Cases
Cerebral injury	45
Cervical cord injury	3
Crushing of chest injuries	3
Abdominal injuries	9
Multiple injuries	21
Total	81

DISCUSSION

From the foregoing data it appears that the typical child pedestrian killed in a vehicular accident is not, as might be supposed, the victim of a speeding or intoxicated driver. Rather, he is a small child, often of preschool age, who while playing without adequate supervision in front of his home, darts into the path of a moving vehicle. He is often not observed by the driver of the car, perhaps because of his size. Usually he dies of a head injury before adequate medical and surgical treatment can be instituted.

From these data it is apparent that better traffic engineering, more traffic lights and stop signs, or better enforcement of existing traffic laws, will not provide the answer to the problem of child pedestrian fatalities. Perhaps the greatest inroads into the problem will be made by an education program beginning in the Well Baby Clinics and the pediatricians' offices and carried over into the school years by parent-teacher groups.

The fact that so few accidents now occur in the neighborhood of schools does not mean the problem of traffic accidents has been solved by the present traffic control methods in these locations. Rather it may mean that, in concentrating on devices such as yellow cross walks, stop signs and crossing guards, we may be creating a false sense of security in the child who is thus taught to believe that he may enter and cross safely in any crosswalk without exercising due caution in looking for oncoming cars. In other words, his school crossing experiences have been made artificially safe by intensive efforts on the part of the PTA, and he does not learn self-reliance and the general principle of "look before you leap."

Intensive efforts should be made to educate children in the proper control of bicycles. Children cyclists must be taught to observe traffic regulations, and in no instance should "riding double" be permitted.

In city planning attention should be given to adequate backyard and traffic-free playground areas for children; also to laying sidewalks in new areas where they are now sometimes omitted. The current trend in new Los Angeles subdivisions toward "country estates" on small lots without sidewalks is deplorable, for children must walk in the roadway to visit their playmates.

In the smaller group of accidents in which the driver is primarily to blame, better traffic law enforcement, stiffer penalties, and an increasing program of driver education is indicated.

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Social Security Footnotes

AMERICAN MEDICINE would do well to study the plight of physicians in Britain and France before accepting financial arrangements that would make them sitting ducks for capture by government.

—From the Department of Public Relations, American Medical Association

The Controversial Ovary

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• Routine removal of ovaries at hysterectomy has been urged as a means of preventing ovarian carcinoma. Proponents of this policy, however, have not submitted the crucial datum: What proportion of women undergoing hysterectomy for benign conditions will later have ovarian carcinoma if the ovaries are not removed. Granting that oophorectomy will effectively prevent ovarian carcinoma, it creates an endocrine imbalance that cannot be corrected artificially, and the lack of ovarian hormones may precipitate osteoporosis or cardiovascular disease. If the ovaries appear normal, if there is no history of carcinoma, and if the patient understands and accepts the risk, the ovaries usually can be conserved at hysterectomy for benign conditions.

THE QUESTION of whether or not to remove normal ovaries at the time of hysterectomy for a benign uterine lesion revolves mainly about our fear of the possible future development of carcinoma of the ovary. While the incidence of ovarian carcinoma is less than in either the corpus or the cervix, it does occur with sufficient frequency and insidiousness, and with so unfavorable a prognosis, that there would appear to be some justification for oophorectomy in such opportune circumstances as when the uterus is to be removed.

Certainly in young women this additional procedure is generally not acceptable or advisable, but during the climacteric when the ovaries appear to be functionally on the wane there would seem to be some merit in removing them. If, in fact, ovarian function is absent or short-lived after hysterectomy, then there can be no doubt as to the advisability of simultaneously removing both ovaries. In a given case physicians are usually guided, first, by the statistical evidence as to the incidence and likelihood of carcinoma developing in such ovaries, and second, by personal prejudices. These are usually based upon a limited experience, for not many physicians see enough cases of ovarian carcinoma to formulate well-founded and definitive conclusions. Probably almost anyone who has seen ovarian cancer in patients who have had hysterectomy, patients who would probably have been spared this fate if the ovaries had been removed at the same operation, would be easily convinced that oophorectomy is advisable.

The statistical data on the subject are in many respects confusing and subject to misinterpretation. The death rate for carcinoma of the ovary is 16 to 25 per 100,000 in women between the ages of 45 and 64, according to the 1956 published reports of the Metropolitan Life Insurance Company. These data reasonably accord with those cited by Hollenbeck[5] and Randall.[7] Several reports[2,3] indicate that approximately 3 per cent of patients have had operations at which oophorectomy, had it been done, might have prevented the disease. Some investigators regard this as a significant figure and consequently favor routine removal of ovaries incidental to hysterectomy.

A comparison of current statistics[1,3,7] suggests several things. First, carcinoma of the ovary appears to be significantly more frequent in women who have had previous pelvic operations for benign lesions than in other women of the same age. Second, there is an obvious disparity between probability,[1] incidence[5] and actual mortality rates for ovarian carcinoma[8]; and third, the interpretations indicate certain fallacies in the application of statistics to medical management.

With a death rate about 20 per 100,000 in women between 45 and 64 years of age,[6] we would theoretically prevent something less than two cases of ovarian carcinoma for every 10,000 operations if all of this age were castrated. In one report it is stated,[3] "Yet the fact remains that the incidence of patients in the combined series (2,097 cases) who developed carcinoma after having had initial surgery at the age of 40 or over shows an over-all rate of 3.05 per cent. Is this a significant figure? We are of the opinion that it is."

To say that 3 per cent of women with ovarian cancer have had operations at which oophorectomy would have eliminated the disease, is not the same as saying that 3 per cent of women with hysterectomy will have cancer of the ovary; yet that appears to be the implication in this and similar discussions. If this is not the implication, then the 3 per cent figure loses much of its significance. None of the reports, in fact, state the overall number of women who have had hysterectomy, nor do they list the indications for the operation. While this is obviously difficult to do, nevertheless it is

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Submitted January 2, 1958.

pertinent to any evaluation of the subsequent risk of carcinoma of the ovaries and the advisability of removing them. If this figure is significant as is implied—if ovarian carcinoma is materially more frequent in women who have undergone hysterectomy—then it must be considered that in these women the removal of the uterus may have contributed to subsequent pathological changes in the ovary. Then, further, the conditions which produced the initial benign uterine lesion may have continued to act unfavorably on the ovaries, or on the other hand uterine activity before hysterectomy may have inhibited ovarian disease which afterward could proceed unchecked.

Obviously, then, this statistical information is not too helpful in deciding whether or not ovaries should be removed at the time of hysterectomy. As a prophylactic measure there can be no question that removal of them will usually prevent ovarian cancer; but whether by removing normal ovaries some other metabolic disease may be precipitated is a matter which must also be considered. We may tend to overlook or ignore the effects of this procedure which manifest themselves in other than the gynecological domain.

I am sure that because of personal experiences, bias or conviction, many surgeons will continue to remove ovaries at the time of operation in women beyond a certain age—drawing the line at 40 years, 45 years, or the menopause. Such arbitrary division is based on the false assumption that chronological age is synonymous with physiological age. The more conservative surgeons may remove one ovary only, in the belief that they are thus reducing the risk of carcinoma by 50 per cent. But very often the wrong ovary might be removed. The ovary with greater function may be enlarged by a corpus luteum or some such physiologic cause indicative of usefulness but may, to the inexperienced, appear to be the one most likely to give trouble, and therefore be removed. Frequently the smaller, corrugated, atrophic-looking ovary with no evidence of recent activity is the one that is left behind, and this may be the potentially malignant one.

As a point in favor of removing ovaries it is generally noted by proponents that menopausal symptoms which may ensue can be adequately controlled with preparations now available. The ability to control symptoms, however, is a far cry from being able to restore a distorted endocrine balance and few physicians, I am sure, would claim any great proficiency in this regard. (Administration of insulin is a prime example of endocrine therapy which fails to prevent secondary disease processes.) If it were true that the endocrine system can be adequately controlled and balanced by hormone therapy, then it would not be necessary to set any specific age limit with regard to removing ovaries, not even the limit of 40 years.

Although menopausal symptoms occur in approximately 25 per cent of women after hysterectomy even when the ovaries are not removed,[9] it does not follow that the ovaries have ceased to function. All that can reasonably be said regarding the menopausal ovary is that it ceases to ovulate and to secrete progesterone rhythmically. Because the normal postmenopausal uterus does not bleed, it does not follow that the ovary is no longer active. The functions of the ovary are altered merely because body needs are altered and to these functions the uterus no longer responds.

If in fact the ovaries do have a function after the menopause, then removing them at age 40 or thereabouts would deprive the average woman, whose life expectancy is now 70 years, of useful organs for not less than a quarter of her existence. Certainly there is increasing evidence of continued ovarian activity beyond the menopause. The osteoporotic changes which occur in oophorectomized patients are noteworthy in this regard. And, according to Griffiths[4] the deleterious effects on the cardiovascular system are so important as to outweigh possible beneficial effects of castration except in exceptional circumstances.

We cannot, then, be dogmatic about this question at present. Individual assessment of each patient will probably yield optimum results. There is undoubtedly even an occasional elderly postmenopausal patient in whom the ovaries should be left and also now and then a patient under 40 who should have them removed. The patient who sincerely fears for loss of libido should not have oophorectomy—except in case of clear-cut necessity—regardless of age. In the patient with cancerphobia or a family history of cancer, oophorectomy should be done regardless of whether she is near the menopause.

Provided that the ovaries appear normal, that there is no history of carcinoma, and that the risk entailed has been clarified for the patient before operation, the ovaries can usually be conserved.

It is not always easy to decide whether the ovaries are normal. Naturally, the greater the surgeon's familiarity and experience with ovarian disease the less often will the issue be in doubt. Perhaps there is a place for routine biopsy by wedge resection of the ovaries in cases in which it is planned not to remove them. Some ovarian carcinomas have occurred within a year or two of the initial pelvic operation; this suggests that they may well have been present at the time of hysterectomy.

For physicians who feel that evidence concerning functional activity in postmenopausal ovaries is lacking and that the risk of carcinoma warrants routine removal of ovaries, the age of the patient should not be of great moment since a 35-year-old woman free of ovarian disease has a greater chance of getting carcinoma of the ovary than an older woman with normal ovaries.[1] Statistically, it is just as reasonable to remove both breasts in all women at age 40, when these structures have no further physiological function but have a greater danger of carcinoma than all gynecological cancers combined.

The term *routine,* applied either to conservation or to removal of ovaries, has no place in our present policy on hysterectomy for benign disorders. The most favorable results will probably be achieved by pondering the individual merits of the procedure in each case.

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BEN C. EISENBERG, *M.D.*, Huntington Park

ALLERGISTS ARE AT LAST taking their rightful place alongside other medical specialists. They are seeing more and more of the serious problems in their field, whereas the milder cases are being handled quite adequately by generalists, internists and pediatricians.

Indeed, allergists doing investigative work in various medical centers of the world, including Russia, are contributing substantially to our body of scientific knowledge concerning basic immunology, the pharmacologic and physiologic aspects of many new drugs, fractionation of various antigens into their more reactive components, and the development of more effective means of combating diseases of hypersensitivity. In addition to their relentless attack directed toward unraveling the mysteries concerning the role of histamine in these reactions, many allergists are engaged in trying to find what part serotonin plays in allergic and inflammatory diseases. This research has been spurred on by three recent findings; namely, (1) serotonin (5-hydroxytryptophan) has been identified, along with histamine, in the lungs and sera of laboratory animals; (2) serotonin, like histamine, is capable of producing bronchospasm; (3) serotonin is released into the bloodstream, together with histamine, in experimental anaphylaxis.

Allergists not only are searching for more effective drugs to relieve persons with allergic disease but are attempting to perfect antigenic materials and methods for longer-lasting hyposensitization. Also, there is the never-ending search for those underlying structural, hormonal, and enzyme-system deficiencies responsible for mediating the allergic response. Some allergists are also studying the role of psychogenic factors in hypersensitivity and how best to deal with them.

Allergic reaction to foods is being intensively investigated. It has been found that, by testing with specific serum fractions through use of the Prausnitz-Küstner technique, sensitivity to foods may be uncovered, whereas reactions to the whole serum are often negative. This speaks for the presence of a "blocking" substance in unfractionated serum which prevents the detection of food reagins. These studies will be of great aid in the diagnosis and treatment of sensitivity to foods. Other investigators working with serum have succeeded in manufacturing "normal" antibodies against ragweed pollen and other antigenic substances. These antibodies can be used to prepare a vaccine for passive immunization and treatment of allergic diseases.

In spite of these advances, too many physicians still advise parents of allergic children to adopt a "do nothing" attitude regarding hay fever, asthma and eczema, claiming the children will "out-grow" these conditions. Much childhood and adult disability, such as facial deformities, malformed dental arches, hearing defects and chronic pulmonary emphysema can be prevented, or at least minimized, by helping the allergic youngster to resist repeated allergic and bacterial insult to the various tissues involved. This can be accomplished in at least 75 per cent of cases through a careful search for etiologic factors, including skin-testing and specific immunization where indicated.

Allergists must have well rounded medical knowledge. At one and the same time they must be good internists, capable immunologists and botanists, practical psychologists, endocrinologists, pharmacologists and discerning dermatologists. Specialists in allergic conditions must constantly be on the look-out for nonallergic diseases which often mimic the manifestations of allergic reaction. The dictum, all that wheezes is not asthma, simply means: Look for the exact cause—it may not be allergic. Likewise, all that vomits is not food sensitivity and all that sneezes or itches may not be due to a hypersensitivity reaction.

PSYCHOSOMATIC ALLERGY

At a recent session of the American Academy of Allergy, three speakers stated emphatically that they knew of no cases of eczema, asthma or other allergic disease benefited by psychotherapy. To me this is but an example of telescopic vision—seeing only what you want to see, believing only what you want to believe—for the facts prove otherwise. This is not to deny, however, that a far greater proportion of patients with allergic disease are improved by the specific etiologic and immunologic approach than by psychiatric treatment alone. The Atomic Age

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Chairman's Address: Presented before the Section on Allergy at the 86th Annual Session of the California Medical Association, Los Angeles, April 28 to May 1, 1957.

From the University of Southern California School of Medicine, Los Angeles.

allergist must streamline his practice so as to include the dispensing of bits of "psychosomatic medicine" to patients who need it. This he can learn to do, provided he first develops an understanding, unhurried attitude that will encourage the patient to talk. Here, it is best to keep in mind one's limitations, and tactfully divert the stream of conversation away from areas beyond our capabilities. Where patients are not responding to the usual type of treatment, and it has been determined that a large portion of the problem stems from psychogenic factors, they should be referred to a competent psychiatrist, with continued symptomatic or other care carried out by the referring allergist.

There need be no difficulty in understanding the impact of emotions on disease processes, provided one recognizes that powerful, hidden forces may be generated by undue psychologic stress in connection with intense sibling rivalry or such repressed feelings as resentment, hostility, guilt, frustration and sex drives. Our newspapers speak daily of the havoc, crime and destruction such energy-potentials can wreak when they are not controlled. These same forces, when turned "inward," may facilitate or trigger such allergic responses as urticaria, migraine, vasomotor rhinitis or bronchospasm, as well as other reactions like hypertension, headache, cardiovascular irregularities and gastric distress. Hypnotists recently have, in fact, been able to reproduce urticaria and angioedema in certain subjects by recalling emotionally charged situations which were responsible for setting off these same reactions some time previously.

From this it follows that if a person with allergic disease learns to deal with his problems in a more mature, adult fashion, he may lighten his psychosomatic load, as it were, and have a better chance of obtaining a "cure." Here, psychotherapy by a specialist in this field may be of considerable help. By and large, however, it is usually not necessary to refer many cases for such treatment, most physicians being able to aid their patients adequately through proper guidance and counseling.

On the subject of psychosomatic allergy, I would like to outline some general impressions gained from observing many patients in clinic and private practice. Let me state at the outset that no concrete evidence has been brought forth to show that people with allergic sensitivity fit into a definite, predictable, emotional pattern. People are people, whether allergic or not, and are all subject to the same physical and psychological stresses and strains peculiar to the times or culture. There are exceptions of course, as, for example, persons who have incurred inordinate suffering at the hands of cruel or sadistic parents, foster parents, siblings or teachers, or those who have encountered unusually shocking experiences, serious accidents, profound illnesses or incest. Emotional trauma can leave permanent "scars" which may retard emotional maturation or warp the personality. This is especially true in the case of adverse psychological experiences occurring at an early age, or for that matter at any age, in certain predisposed or supersensitive persons.

Now, given just such a person, prone to easy anxiety and tension, who happens also to be constitutionally predisposed to allergic reaction, a single incident capable of producing emotional stress, or a series of disappointing or frustrating experiences may "trigger," for the first time, asthma or other diseases of allergy. This can happen because of the powerful effects destructive emotions exert upon body chemistry, endocrines and other organs, and on the autonomic nervous system. Bronchospasm, edema, increased secretion of bronchial glands, and wheezing dyspnea mediated through such a mechanism are just as real as any produced by exposure of a susceptible individual to pollens, food, animal dander or injection of horse serum or drugs. Physicians requiring "proof" that psychogenic factors are capable of producing measurable evidence of physical bodily change need only collect the tears that flow from sorrow or joy, the stomach contents of the child who promptly vomits at the prospect of having to return to school and face a "mean, yelling" teacher or cruel playmate, or the sudden profuse discharge from the opposite end of the alimentary canal which happens to some persons when exposed to rather frightening experiences.

Of course, there are other important factors involved, each of which is capable of setting off the allergic response, given the proper set of circumstances—namely, hypersensitive tissues plus specific stimuli strong enough to evoke a reaction. Asthma, for example, may be incited by an attack of pneumonia or other respiratory infection, exposure to chemical fumes, such as chlorine or ammonia or motor exhaust, or following inhalation anesthesia or surgical operations on the nose and throat, after an injection of sera, vaccines or drugs, following severe physical exertion, or upon exposure to certain pollens, foods, animal danders, dust and many other substances ordinarily harmless to others.

Asthmatic attacks precipitated largely by emotional reactions have been seen by all of us—for example, following marriage, separation or divorce; following the loss of a close relative or friend; or in anticipation of an important event, including school proms, facing the boss, appearing in court, and the like. Actually, as far as the various etiologic components are concerned, an asthmatic person may require only a single physical or psychogenic factor, or a combination of several or all of them, to produce symptoms, and, furthermore, the "mixture" may vary for different attacks. Thus, allergy may be likened to a pot of stew, in which the amounts of the various ingredients used—meat, potatoes, carrots, onions—may vary from time to time, but the end result is always stew.

It helps to clear some of the controversial cloud concerning the impact of emotions on disease processes if we but keep in mind the following points:

1. It is normal for each of us to feel and show evidence of emotional turmoil in especially trying circumstances. This in no way implies weakness or lack of fortitude.

2. The manner in which disturbance of this type is expressed differs from person to person, and any tissue, organ or system may become involved, be it from guilt, anger, resentment, fear, worry or frustration. One person may react with tachycardia, another with hypertension or gastrointestinal upset, speech disturbance, hyperventilation, sighing-dyspnea, cough, headache, blushing, urticaria, tremor, fainting or loss of memory.

3. Emotional conflict frequently is not apparent, and the patient may have no idea of its existence; indeed, where there are manifest signs and symptoms because of a disturbed psyche, a considerable portion of the conflict may remain submerged within the particular personality.

4. Signs and symptoms of personality disorders are labeled "pathological" when they become exaggerated over and above the normal response, or persist beyond a reasonable time.

5. Each person has his own particular breaking point—for some quite remote, for others near—beyond which he can no longer endure the adverse stimuli or inner conflict. When the limit is reached, he may "escape" into psychosomatic illness or actually become psychotic. Incidentally, the communists have made use of this principle in their "brainwashing" experiments on prisoners.

PHARMACOLOGIC PSYCHOTHERAPY

Tranquilizing drugs as used in dealing with patients with allergic disease may be helpful in allaying anxiety and tension states, and thus, secondarily, reduce the severity of allergic symptoms. We must be ever mindful, however, that these drugs may be toxic in some cases. Occasionally, combinations of two or more of them will produce a more favorable result. Some of the newer ataractic agents have been quite beneficial, as far as my own experience is concerned, in patients with chronic urticaria and angioedema. They are not too helpful in hay fever or asthma.

Atarax® (hydroxyzine hydrochloride), a comparatively nontoxic drug with very few side effects, is quite useful in treating allergic diseases involving the skin, especially when larger doses are administered than is usually recommended. Incidentally, six children with allergic disease who were given the drug for a two-week period stopped wetting the bed. I do not propose these drugs, however, as a cure for enuresis.

We now are being flooded by a rush of newer tranquilizers—a situation comparable to that seen during the past ten years with regard to the antihistamines. Most of the newer ones, however, are mild and less toxic, and are serving to replace largely the barbiturates. Among the latest additions to the field we may mention Pacatal® (10-(N-menthyl-3-piperidylmethyl) phenothiazine); Nostyn® (2-ethylcrotonylurea); Ultran® (2-p-chlorophenyl-3-methyl-2, 3-butanediol); Suavitil® (benactyzine hydrochloride); Quiactin® (oxanamide): Trilafon® (phentothiazine derivative). These modern dispensers of serenity are not expected to replace good, specific and immunologic therapy.

RADIOACTIVITY AND ALLERGY

Atomic labeling has provided a fascinating medical research tool with which to probe certain heretofore theoretic considerations concerning the site and mode of action and ultimate disposition of foods, drugs, and important chemical bodily constituents. Work is now under way to study that elusive and formidable substance considered to be involved rather intimately with allergic sensitivity—namely, histamine—by means of tagging this substance in the laboratory with atomic carbon (C^{14}). Atomic histamine is being administered to sensitized animals, and its ultimate disposition traced by means of a Geiger counter after the subject is given a shocking dose of antigen. This opens up a new field for interested scientists. Funds for this purpose are available upon proper application to the various allergy foundations and institutes that encourage research in the fields of allergy and immunology.

By means of the electron-microscope, so-called "cell-surgeons" are now able to observe directly the effects of allergic reactions on specific components of body cells. Manipulation of nucleoli and other cellular elements may also supply answers to questions concerning allergic sensitivity and heredity.

Another matter directly related to the atomic age concerns the possible allergic reactions of various degradation products resulting from exposure to atomic radiation and "fallout," and how these effects may be treated or prevented. A great deal of work has to be done in this area, over and above learning to deal more effectively with some of the major disasters of atomic explosions.

In conclusion, let me say that our Atomic Age will yield the solution to many problems which have plagued allergists for many years. I would like to make the following predictions:

1. There will be discovered the specific metabolic, hormonal or enzyme deficiencies responsible for the failure of allergic persons to protect themselves from reactions of hypersensitivity; furthermore, once these substances are identified, true substitution therapy can be instituted, just as insulin is given for diabetes.

2. Effective vaccines containing anti-allergic antibodies will be manufactured for the passive immunization and treatment of patients with hypersensitivity to pollens, foods and other substances.

3. Highly accurate serologic tests will be perfected for the diagnosis of sensitivity response to foods, drugs and inhalants, utilizing specific serum fractions and antigen-antibody mixtures.

4. The influence of climatic factors, such as barometric pressure, humidity, altitude, particulate ionization, and air currents will be elucidated and methods to combat any adverse effects from these elements will be discovered.

5. The cause of those allied allergic conditions, the so-called collagen diseases, will be uncovered. Experiments already have shown the lesions of this group of conditions to contain antigen-antibody complexes. Once the cause, or causes, are found, modes of treatment will soon follow.

6. Better methods of prevention and treatment of industrial contact eczematoid dermatitis, which remains as the Number One cause of lost working man-hours, will be discovered.

7. The cortical and hypothalamic disturbances responsible for the triggering of "psychogenic" allergic disease will be intensely investigated and solved, with the production of an effective chemical agent to satisfactorily tranquilize or block such adverse neuronal activities.

8. Better methods will be developed for the prevention and treatment of pulmonary emphysema—a condition which is, apparently, on the increase and is "crippling" many young persons as well as the middle-aged. Also, more will be learned about the manner in which the broncho-alveolar junction becomes obstructed, and more effective drugs to combat this condition will be found.

9. Means will be found to render antibiotics, blood for transfusions, serums, and other injectables nonallergenic.

10. Simpler methods will be designed for accomplishing extracorporeal oxygenation of blood to circumvent the lungs in serious pulmonary cases (severe asthma, emphysema, pneumonia and operations on the lungs and heart). Also, it is not too far-fetched to predict that patients with emphysema will be enabled to resume normal activities by means of a bottle of liquid oxygen carried on their backs to provide necessary extrapulmonary gaseous exchange through capillary beds artifically constructed by surgeons; or small plastic oxygenators and pumps may be devised for strapping across the back and used for the same purpose.

2680 Saturn Avenue, Huntington Park.

Social Security Says:

"A WIFE OR WIDOW under 62 or the divorced wife of an insured person may receive payments only while she has in her care a child (under 18 years of age) who is entitled to monthly payments."

In other words: Many widows who married in their 20's and lost their husbands in their 40's, would not receive any survivors' benefits until they reached age 62 because their children would be 18 or older.

—From the Department of Public Relations, American Medical Association

CASE REPORTS

Mobile Cystic Teratoma

LOUIS J. BONANN, *M.D.*, Los Angeles

DERMOID CYSTS OF THE OVARY are fairly common tumors which are readily identified in a roentgenogram when dental and osseous inclusions are present. Frequently, visualization of the tumor is enhanced by a thick fibrous capsule, demonstrable as a thin rim of increased density, delimiting the radiolucent lipoid or fluid content of the cyst. These roentgen features were fortuitously all very clearly recognizable in the following case.

A 39-year-old Caucasian woman with ten living children and a history of three abortions had a 7 cm. dermoid cyst of the right ovary removed on January 20, 1956. She had felt something movable in the lower abdomen for several years which was inconstant in location. By pelvic examination and x-ray its mobility was confirmed. The x-ray demonstration of teeth, bone and fatty material inside a thick capsule made the preoperative diagnosis obvious (Figure 1). It was estimated at 10 cm. diameter, but the specimen measured only 7 cm.

Submitted February 10, 1958.

University of California at Los Angeles School of Medicine, Los Angeles 24.

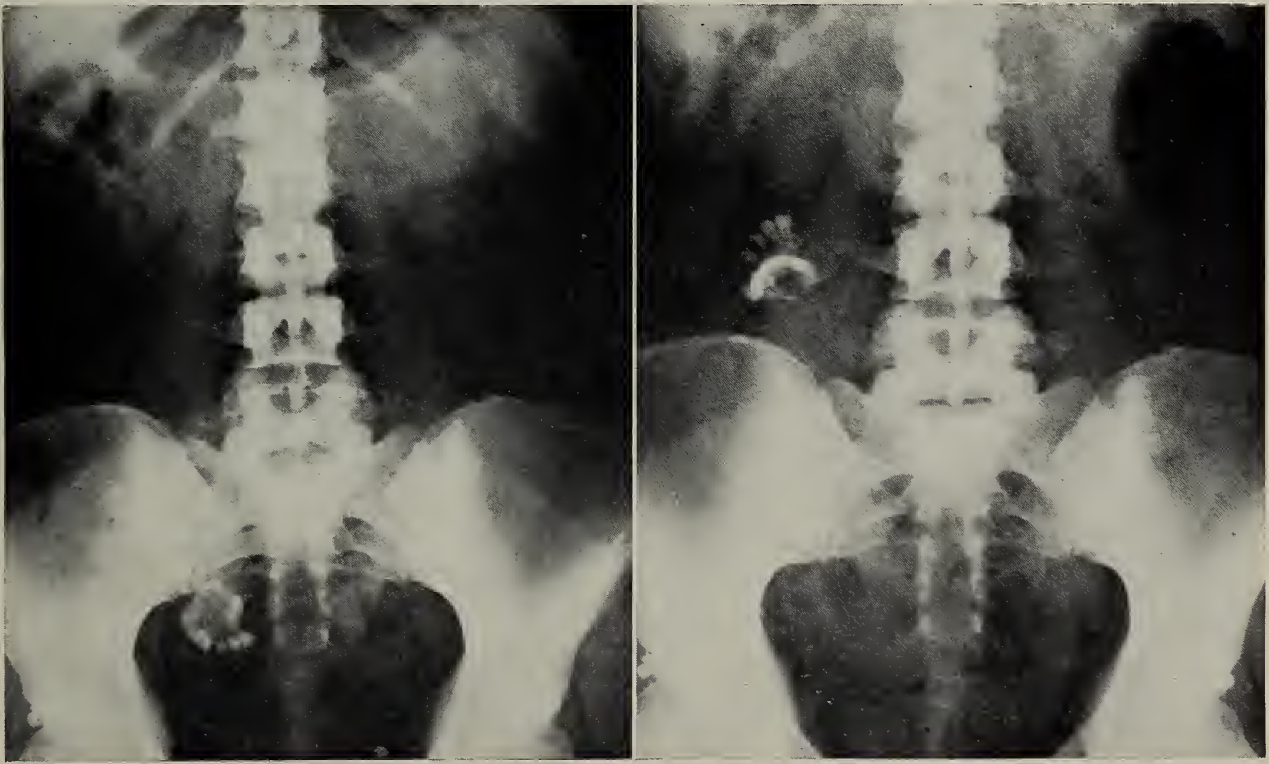

Figure 1.—*Left:* The preliminary roentgenogram disclosing dental and osseous elements on the right side of the pelvis within a rounded cystic area of radiolucency, completely encircled by a dense rim of fibrous capsule. *Right:* Anteroposterior roentgenogram of the abdomen, demonstrating the abdominal position of the mobile mass, now overlying the inferior pole of the right kidney.

Alveolar Soft Part Sarcoma of the Retroperitoneum

BLANCA SMITH, *M.D.*,
ANDREW J. McQUEENEY, *M.D.*, and
D. R. DICKSON, *M.D.*, Santa Barbara

ALVEOLAR SOFT PART SARCOMA, an unusual neoplasm of uncertain histogenesis,[1] has only rarely been reported in the retroperitoneal area. Smetana's comprehensive study[2] recorded only four such cases and the average age of the patients was 25 years. In the case here reported the patient was a 73-year-old woman and the first clinical symptoms were those of partial obstruction high in the intestine associated with severe secondary anemia.

REPORT OF A CASE

A 73-year-old white woman was admitted to Santa Barbara General Hospital on January 2, 1957, with complaint of progressive weakness, anemia, nausea and vomiting of six months' duration. There was a positive reaction for occult blood in the stool. Upper gastrointestinal roentgenograms showed medial displacement and partial obstruction of the second portion of the duodenum by a large mass in the right retroperitoneal area. Pronounced hydronephrosis on the right was demonstrated by an intravenous pyelogram, and retrograde pyelography showed decided distortion and displacement of the right upper ureter (Figure 1).

At laparotomy a large retroperitoneal tumor involving the right kidney and extending over the second and third portion of the duodenum was observed. It was considered nonresectable. The mass, approximately 20 cm. in diameter, appeared to be extrarenal and attached to the right psoas muscle with displacement of the right ureter and moderate secondary hydronephrosis of the right kidney. The external surface of the tumor appeared quite vascular and the cut surface of tissue obtained for biopsy appeared firm, gray and slimy. A palliative anterior gastroenterostomy was performed to by-pass the obstruction.

Postoperatively the patient received irradiation (tissue dose 3,000 r) to tumor mass in the right upper quadrant, with only minimal improvement. Weakness and anemia progressed, due to chronic loss of blood associated with ulcerative tumor extension in the duodenum. The patient died seven months after operation and approximately a year after onset of symptoms.

Pathologist's Report

At autopsy the retroperitoneal mass was observed to extend to the hepatic flexure of the colon, to the second and third portions of the duodenum and to the lower pole of the right kidney (Figure 2). Dissected from contiguous structures, the mass was a lobulated, ovoid tumor measuring 30 x 25 x 15 cm. Cut surfaces were pale ivory-white. The tumor filled the upper right retroperitoneum, producing a 15 x 6 cm. ulcerated tumor mass in the third portion of the duodenum. The posterior aspect of the tumor was attached to the right psoas muscle. Multiple distant metastastic lesions were present in the liver, pleura and lungs.

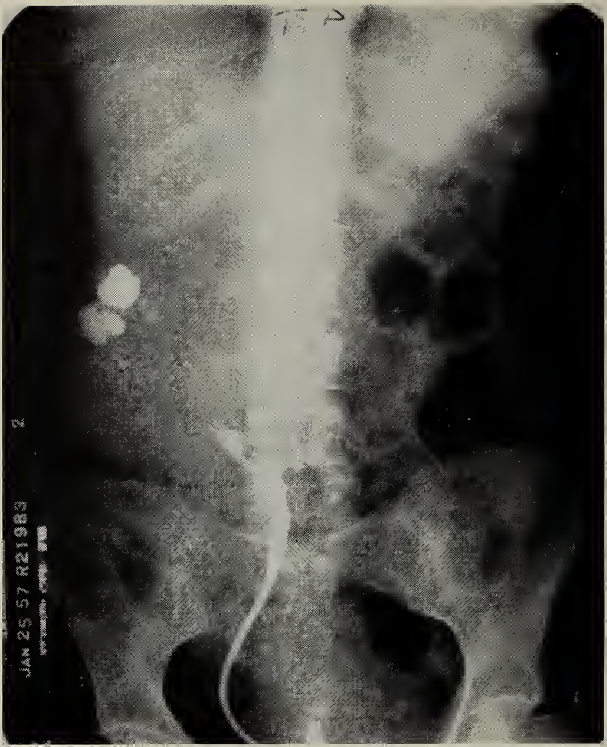

Figure 1.—Retrograde pyelogram showing distortion of right upper ureter due to retroperitoneal alveolar soft part sarcoma.

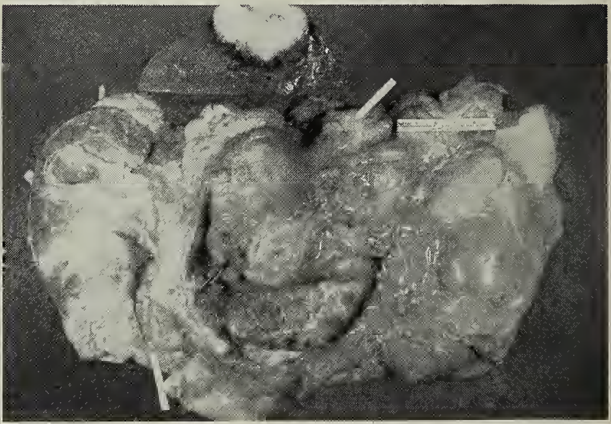

Figure 2.—Retroperitoneal alveolar soft part sarcoma, showing in situ relationship to right kidney and ulcerated duodenal tumor extension. (Probe in ampulla of Vater. Markers at pylorus and right ureter. Liver wedge with metastasis above.)

From the Departments of Surgery and Pathology, Santa Barbara General Hospital and Cottage Hospital, Santa Barbara.

Submitted February 27, 1958.

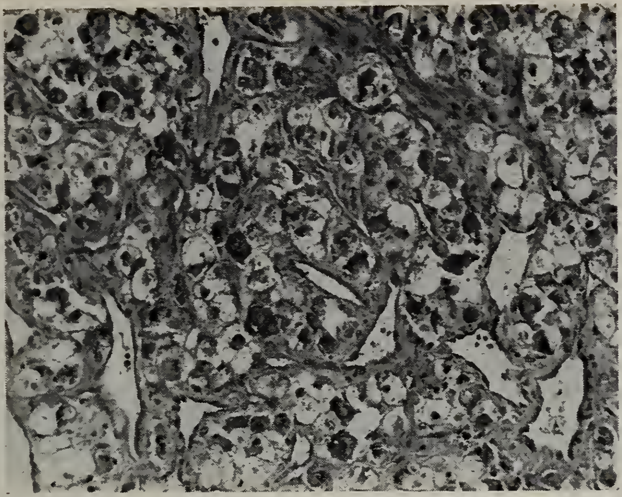

Figure 3.—Primary retroperitoneal alveolar soft part sarcoma (×100) showing characteristic alveolar cell grouping and prominent sinusoidal vascular pattern.

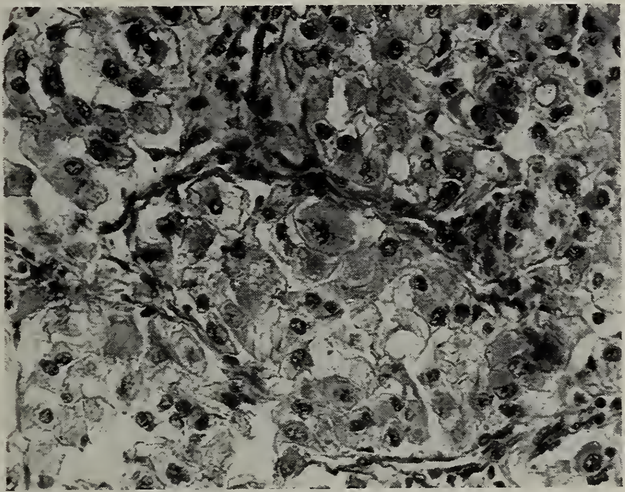

Figure 4.—Gomori trichrome (×400). Pulmonary metastasis of alveolar soft part sarcoma, showing preservation of original growth pattern, with scattered mitoses, one of which is visible centrally.

Microscopically, the tumor consisted of irregular, rounded groups of large cells surrounded by capillary vascular spaces which often appeared compressed, but occasionally were dilated in sinusoidal fashion, producing an organoid or "endocrine" type of arrangement (Figure 3).

Individual tumor cells generally appeared polyhedral or spheroidal in outline. They ranged from 15 to 70 micra in diameter and had an abundant eosinophilic granular or homogeneous ground-glass cytoplasm which often appeared vacuolated but contained scanty sudanophilic material and no demonstrable chromaffin granules. Cell nuclei were rounded to ovoid with vesicular or reticulated chromatin, usually showing a single, slightly acidophilic nucleolus. Mitoses were rare in the original surgical material, but averaged one to three per 10 high power microscopic fields in the postirradiation autopsy specimen (Figure 4).

SUMMARY

A case of alveolar soft part sarcoma of the retroperitoneum in an elderly woman is reported. Autopsy findings included ulcerative invasion of the duodenum and distant visceral metastasis following irradiation therapy.

Santa Barbara General Hospital, San Antonio Road, Santa Barbara (McQueeney).

ACKNOWLEDGMENT

We are indebted to Fred W. Stewart, M.D., Memorial Hospital, New York, and W. K. Bullock, M.D., of the Tumor Tissue Registry, Cancer Commission, C.M.A., for confirmation of the diagnosis in this case.

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Brucellosis—A Case Study

VIRGINIA KVINGE, *M.D.*, Los Angeles

THE CHRONIC FORM of brucellosis may present many subjective symptoms which are difficult to distinguish from those of psychoneurosis—symptoms such as excessive fatigability, myalgia, low-grade fever, depression, insomnia, headache, anorexia and loss of weight. In the acute form of the disease symptoms are more objective. The onset of acute brucellosis is variable, but usually is initiated by fever of the rising "septic" type with morning remissions. Associated with the fever are a slow pulse, neutropenia, diarrhea, headache, depression, muscular aching, fatigue and shifting joint pain. When fever is of the undulant type, febrile episodes persist for ten to twelve days and are followed by periods when the patient is afebrile and asymptomatic. In most cases there are no such undulations and the patient remains ill for two weeks to ten months. In the differential diagnosis of brucellosis, consideration should be given to typhoid fever, Q fever, miliary tuberculosis, chronic recurring infectious mononucleosis, pulmonary or systemic coccidioidomycosis, rheumatoid arthritis, and Boeck's sarcoid.

The clinical diagnosis of brucellosis, therefore, must be substantiated by laboratory diagnosis. Of the many laboratory procedures available, the only absolutely diagnostic criterion is a positive blood culture. If routine blood cultural methods are used, the chance of identifying and isolating the organism

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From the Services of Dr. A. G. Bower, Chief Physician, Communicable Disease Unit of the Los Angeles County General Hospital.

Submitted January 20, 1958.

is practically nil. By use of special culture media—trypticase soy broth and agar cultures—under anaerobic conditions the organism can be identified in a higher proportion of cases whether in the afebrile chronic state or in the acute stage.

The diagnosis of brucellosis by means of a high agglutination titer is generally, but not absolutely, reliable. Huddelson reported cases of negative results of agglutination tests in bacteriologically proven cases of infection with *Brucella abortus.* Also persons vaccinated against cholera may have high titers for brucellosis. An agglutination titer of 1:80 or higher, with either a rising or falling titer during the course of observation, is usually regarded as indicative of the disease.

The complement fixation and opsonocytophagic tests has given unreliable results and as a consequence has been discarded by most clinicians. The brucellergin skin test is still in use in diagnosis by some clinicians, but most have discarded it as not diagnostic. It may cause a local slough at the site of injection, and it may induce antibody formation which later will interfere with evaluation of agglutination titers. Negative results of the brucellergin skin test have been reported in many cases in which bacteremia was demonstrated, and positive skin reactions have been reported in persons having no clinical manifestation of disease.

REPORT OF A CASE

Four weeks before admittance to hospital, a 64-year-old unemployed Mexican farm laborer had chills and fever while vacationing in Juarez, Mexico. The chills and fever occurred on alternate days for a total of five days and were associated with cramping pains in the legs. Upon subsidence of fever, diarrhea developed, the patient passing seven to fifteen yellowish watery stools a day. This persisted until admittance to hospital. Four days before admittance, fever recurred and the patient then for the first time sought medical attention. He was referred to the Communicable Disease Unit of the Los Angeles County General Hospital because of suspicion of typhoid fever. The patient had received no antibiotics or sulfonamides during the previous month. He had lived in Juarez, Mexico, until 1956, but said he had had no similar episode.

He was observed to be depressed, lethargic and confused. The temperature was 100.8°F., the pulse rate 104. No rash, joint involvement or splenomegaly was noted. Leukocytes numbered 3,500 per cu. mm., with 49 per cent neutrophils. The serum agglutination titer for brucella was 1:10,240 on one occasion and 1:5,120 on another. *Brucella abortus* was cultured on trypticase soy broth and agar in three separate blood cultures.

The patient was started on a ten-day course of 1 per cent sulfanilamide in sodium lactate Ringer solution by hypodermoclysis and 1 gram of streptomycin every 12 hours. The blood level of sulfanilamide was to be maintained at 15 mg. per 100 cc. or higher. The original dose was calculated at 0.12 gm. per pound of body weight to be given in three equal doses at eight-hour intervals over a period of 24 hours. This amount was gradually decreased, but the blood level of the drug remained at 30 to 40 mg. per 100 cc.

During therapy, blueness of the lips and skin was noted. Methemoglobin determinations were done and values as high as 0.17 mg. per 100 cc. were obtained. The sulfanilamide dosage was diminished but not discontinued. Ascorbic acid, 500 mg. three times a day was given and the bluish color diminuted. The urinary pH was maintained at 7.5 to prevent sulfa-crystal formation in the urine. Serum electrolytes remained normal throughout therapy. On the eighth day of therapy the patient became afebrile, but subjective depression did not subside until a week after cessation of treatment. He was discharged on the 24th day of hospitalization, two weeks after fever and other symptoms had disappeared.

SUMMARY

A patient admitted to hospital with suspicion of typhoid fever, had high titration for brucellosis, and *Brucella abortus* grew on a culture of blood. The patient was treated with sulfanilamide and streptomycin and a cure was effected.

Wadsworth General Hospital, Sawtelle and Wilshire Boulevard, Los Angeles 25.

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EDITORIAL

C.M.A. Changes Structure

Decisions of the 1958 session of the House of Delegates resulted in several changes in the structure of the California Medical Association and in a number of operational adjustments in the workings of the organization.

Principal adjustment in the basic structure of the C.M.A. came in the adoption of amendments to the Constitution which alter the allocation of members of the Council.

Under the Constitution as it was written prior to last April 30, the Council consisted of eleven District Councilors, each chosen by the elected Delegates of his own geographical district, and six Councilors-at-Large who were elected by the House of Delegates. In addition, the President, President-Elect, Speaker and Vice-Speaker of the House of Delegates served on the Council with full powers, and the Editor and Secretary served ex-officio without the right to vote.

With Councilor Districts set on the basis of geographical lines, the former setup permitted one district with as few as 360 members to name one member of the Council, while other districts with as much as ten times that membership were likewise limited to one Councilor.

The constitutional amendments voted on April 30 provided for a proportional representation on the Council, based on one member of the Council to be named by his own District delegates for each 1,000 active members in the District. A minimum of one Councilor for each district was written into the amendments, so that all areas of California will have a Council representative, regardless of the limited membership in any district. Under this setup the two Councilor Districts which formerly covered Los Angeles County have been combined into one district. The other nine districts remain the same. However, the Los Angeles County district is now entitled to six Councilors, each of the remaining districts to one Councilor; and the former Councilors-at-Large have been eliminated.

The President, President-Elect, Speaker and Vice-Speaker of the House of Delegates retain their former positions as members of the Council and the Secretary and Editor continue as ex-officio members. This makes a Council of 19 voting and two non-voting members, two less than the former membership.

In the new setup there are counter-balances to compensate for the addition of four Councilors in Los Angeles County: Formerly, two Councilors-at-Large came from that county, and the Speaker and Vice-Speaker of the House of Delegates likewise were Los Angelans. By voting out the Councilors-at-Large and by electing a Vice-Speaker from another county, the House of Delegates actually raised the Los Angeles County representation on the Council by only one member. At the same time, the House provided that at no time could the number of District Councilors from any one district exceed 40 per cent of the total Council membership.

Besides these changes through amendments to the Constitution, the House voted a number of internal changes in the Association. For example, by a change in the By-Laws the office of Secretary-Treasurer was renamed to eliminate the "treasurer" part of the title. All duties of the "treasurer" have for many years been handled administratively, so that part of the old title had become meaningless.

Under the revised By-Laws, the Secretary is continued in his principal activity as chairman of the Committee on Scientific Work, which makes up the Annual Session program.

The former Auditing Committee was renamed the Finance Committee in another amendment which also spelled out more clearly the manner in which annual budgets shall be prepared and presented for vote.

Duties of several officers were realigned in other amendments to the By-Laws which were designed to bring C.M.A. activities up to date in the light of current activities.

Disciplinary procedures were also altered in two other By-Law amendments which eliminated the previous limitation of one year on the time a member could be suspended. The House followed the reasoning of the proponents of this measure that some latitude should be permitted in disciplining a member between the extremes of a short one-year suspension and an outright revocation of membership.

The House of Delegates also acted to change the dues structure for physicians starting in medical practice and for those engaged in postgraduate study or disabled by protracted illness. These changes will eliminate a great deal of paperwork and make the work of county medical society secretaries easier.

In another amendment, the House voted to eliminate the Executive Committee as an official body and to replace it with a smaller group of top officials empowered to act in case of emergency but limited in their actions by the need of Council approval. Now that it has become the policy of the Council to hold meetings monthly, the functions of the Executive Committee as an administrative body have declined to a point where this change will contribute to a smooth operation of the Association.

Many of the amendments adopted at the 1958 session stemmed from the structural study of the Association made late in 1957 by Robert Heller and Associates, Cleveland business engineers. The Heller studies pointed to several areas where C.M.A. operations could well be streamlined or modernized. In addition, several By-Law changes were prepared by the Council and by the special committee which last year studied the Constitution of the Association.

Adoption of three amendments to the Constitution and ten to the By-Laws points up the fact that any organization must take time out periodically to bring its official documents up to date. As was demonstrated by the 1958 House of Delegates, the ruling articles of an association can become cluttered with outdated requirements which may be retained, for sentimental or other invalid reasons, and hence need reviewing from time to time. As so often happens in such circumstances, a whole series of amendments are easier for the legislative body to swallow than would be a single proposed change which might carry the aura of bias or special privilege.

It is obvious that the conduct of the California Medical Association will be strengthened under the changes voted this year. At the same time, the House of Delegates has expressed its complete willingness to consider and vote on changes designed to make for better or more efficient operations.

Editorial Comment . . .

The Job and the Man

COMING AT A CRITICAL TIME in the progress of the Stanford University School of Medicine, Dr. Robert H. Alway's recent acceptance of permanent appointment to the deanship of that institution can be doubly celebrated.

1. The job, more than ever demanding, now that large scale removal of Stanford's Medical School facilities from San Francisco to a great new teaching center on the Stanford campus is going forward, is one for a man who is at once physician and educator and administrator and work-horse. The job has found the man. As acting dean, Dr. Alway had been doing the job for some time, and recently at last was persuaded by the university's president, Wallace Sterling, to reconsider his original refusal to take the position permanently.

2. In his first public statement after accepting the appointment, Dr. Alway not only showed a full understanding of all the implications of the tasks before him but also his words conveyed a feeling of the beginning of strong bonds such as those that, now and again, ideally bind a man to a job and a job to a man.

The purpose of consolidating the Medical School on the University campus, Dr. Alway said, is "to increase the breadth and effectiveness of medical teaching and education.

"It will be contrary to these aims if the full-time faculty is not free to devote its principal energies to teaching and research, undiluted by the demands of private medical practice.

"The medical faculty will care for patients, of course, being obligated to use its knowledge and skill for the benefit of humanity. Its teaching is all the more effective when it does so.

"Until the Medical School's financial resources allow adequate full-time salaries, some faculty members in the clinical departments will engage in limited private practice as at present. Most of the patients seen by faculty will be on referral from other physicians, and their number must be limited to the requirements of teaching and research. The medical faculty will instruct students and carry on research, not engage in the practice of medicine to support the school."

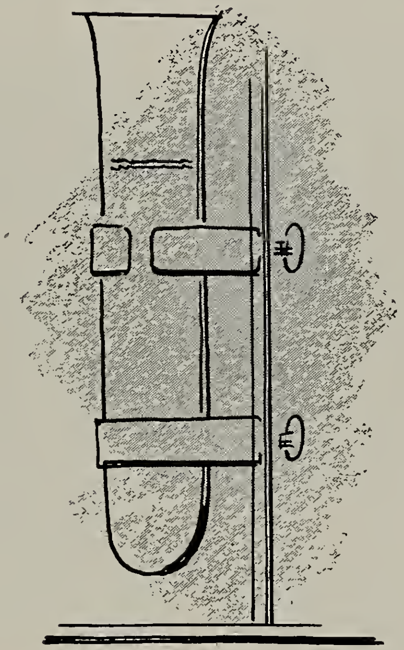
As to the future of Medical School facilities in San Francisco, Dean Alway discussed the proposed modernization and continued operation of San Francisco Stanford Hospital as a private hospital. "The hospital would have an intern and residency training program, and might also have a limited research program with the necessary library facilities. These would be administered by the Medical School.

"The San Francisco Stanford Hospital and any training and research program would have to be entirely self-supporting. Financing construction and operation of the new Medical School on the campus precludes continued University support of the San Francisco operations. This will preclude, as well, continuation of an outpatient or hospital clinic service there."

On the much discussed questions of the movement of medical faculty members to Palo Alto next year and the availability of voluntary faculty, Dr. Alway spoke with diplomatic forthrightness:

"We believe that full-time faculty whose activities have been and interest are concentrated in medical education and research will make the move. We also believe that the voluntary faculty in San Francisco will continue to teach at Stanford in Palo Alto, just as their fellow practitioners from the Peninsula and other Bay Area communities faithfully have come for so many years to Stanford in San Francisco."

Besides this realistic attitude, Dr. Alway has these recommendations: His ability to do the job is already proven, and now in accepting the appointment he has shown that his desire to see it done well has outweighed his hope that someone else might be found to do it. Job and man seem to have come to a happy union.



California MEDICAL ASSOCIATION

NOTICES & REPORTS

Transactions of the House of Delegates

Los Angeles, April 27 to 30, 1958

The 1958 House of Delegates of the California Medical Association transacted a record business. It acted upon one proposed amendment to the Constitution which included four parts, on 17 proposed amendments to the By-Laws and on 72 resolutions.

This volume represents more than double the business coming before the House in 1957.

To handle the extra load, Doctor James C. Doyle, Speaker, named two additional reference committees, so that three committees handled new business and reported to the House. All resolutions were classified into the broad fields of public assistance, medical economics and general business, so that related items could be studied and resolved together. As a further means of assuring coverage of all items and eliminating overlapping, the members of the three reference committees on new business met before making their reports to the House of Delegates and reviewed the entire list of resolutions so that they could be properly assigned.

Of great help in the handling of such a volume of business was the cooperation of the county medical societies and their delegations in transmitting resolutions to the C.M.A. office in advance of the meeting. This enabled the office to prepare and place in the hands of the Delegates as they were seated about 75 per cent of the total business to come before them. While the House did not act favorably on a proposed By-Law amendment to require the advance presentation of all new business, it was obvious that the Delegates favored advance notice on the business they must consider and would cooperate in seeing that the members of the House are notified in advance of the work to come before them.

The following report of the transactions is an abridgement. A complete transcript of all sessions of the 1958 House of Delegates is on file in the Association office in San Francisco and available for the inspection of all members.

* * *

At the first session of the House of Delegates of the California Medical Association, Sunday morning April 27, 1958, Speaker James C. Doyle named the following members to Reference Committees and their appointment was accepted by the House.

REFERENCE COMMITTEES

The Committee on Credentials: Finis G. Cooper, Huntington Park, chairman; Joseph G. Middleton, San Luis Obispo; George H. Houck, Palo Alto.

Reference Committee 1. Stanley R. Parkinson, Marysville, chairman; Howard E. Clark, Monterey; Fred E. Bradford, Los Angeles.

Reference Committee 2. Francis N. Hatch, Modesto, chairman; Donald M. Campbell, San Francisco; James J. Morrow, North Hollywood.

Reference Committee 3. Frederic Ewens, Man-

FRANCIS E. WEST, M.D. . . . . President
T. ERIC REYNOLDS, M.D. . . . . President-Elect
JAMES C. DOYLE, M.D. . . . . Speaker
J. NORMAN O'NEILL, M.D. . . . . Vice-Speaker
DONALD D. LUM, M.D. . . . . Council Chairman
ALBERT C. DANIELS, M.D. . . . . Secretary-Treasurer
IVAN C. HERON, M.D. . Chairman, Executive Committee
DWIGHT L. WILBUR, M.D. . . . . Editor
JOHN HUNTON . . . . Executive Secretary
General Office, 450 Sutter Street, San Francisco 8

ED CLANCY . . . . . . Director of Public Relations
Southern California Office:
2975 Wilshire Boulevard, Los Angeles 5 • DUnkirk 5-2341

hattan Beach, chairman; John G. Morrison, San Leandro; Joseph W. Telford, San Diego.

Reference Committee 3A. Robb Smith, Orange Cove, chairman; Robert C. Combs, San Francisco; William F. Quinn, Los Angeles.

Reference Committee 3B. Burt Davis, Palo Alto, chairman; Robert L. Stern, Beverly Hills; Norman C. Fox, San Bruno.

Reference Committee 4. J. B. Price, Santa Ana, chairman; Roderick A. Ogden, Bakersfield; Robert B. Haining, Glendale.

Reference Committee on C.P.S. Business: Lewellyn Wilson, Anaheim, chairman; John F. Mayo, Lodi; Cedric C. Johnson, Santa Rosa.

The Constitutional Study Committee (to report Resolution 2 of the 1957 House of Delegates): Sam J. McClendon, San Diego, chairman; Robb Smith, Orange Cove; C. J. Attwood, Oakland; Matthew Hosmer, San Francisco; Carl Hadley, San Bernardino; Marden Alsberge, Glendale; James Moore, Ventura; Fred Olson, Fortuna; James Yant, Sacramento; Jay J. Crane, Los Angeles; Leslie Magoon, San Jose.

The Reorganization Committee (Resolution 24 introduced in the 1957 House of Delegates): Frederic Ewens, Manhattan Beach, chairman; Dwight Murray, Napa; John Cline, San Francisco; Lewis Cline, San Francisco; Dan Kilroy, Sacramento; John Rumsey, San Diego; James Feldmayer, Exeter.

The Adoptions Committee (on Resolution 41 introduced at the 1957 House of Delegates): Frances Holmes, Los Angeles, chairman; Russell Mapes, Beverly Hills; Joseph Telford, San Diego; Lee Fulton, Redding; Henry Tieche, Fresno; Jack Rovane, Sacramento; Agnes Plate, San Francisco.

* * *

Mrs. Leonard D. Offield, President, Woman's Auxiliary to the California Medical Association, addressed the House of Delegates on the activities of that organization and urged greater use of the Auxiliary's forces and talents for medical public relations.

ADDRESS OF THE PRESIDENT

Frank A. MacDonald, *President*

Mr. Speaker, members of the House of Delegates, and guests:

As physicians, the greater portion of our daily thinking is concerned with the welfare of our patients, with scientific advances in medicine and with the multitude of duties associated with modern medical practice. As citizens, our minds are occupied with the problems of inflation, rising living costs, excessive taxes and spiraling wages. Consideration of these factors must of necessity occupy the greater portion of our daily thinking and seldom allow us an opportunity to consider carefully the serious problems which confront medicine.

So let's take a short recess from our daily activities and analyze some of these controversial problems. Scientifically, medicine has made dramatic progress for which the American public is wholeheartedly grateful. Our major difficulties lie in the fields of medical economics, legislation and in the political arena.

I. *Organizational and Administrative Problems*

For many years the C.M.A. has been growing faster than any other state medical association in this country and now boasts of over 16,000 members. With this rapid growth, mounting problems of an organizational and administrative nature have developed. The A.M.A., when confronted with similar problems last year, employed business experts to analyze its entire structure and subsequently obtained a blueprint for present and future improvement.

The Council in September of 1957, after careful investigation, instituted a similar survey in California. The same group of experts, Robert Heller & Associates of Cleveland, were employed and their report was completed in December of 1957. The Council has made many changes of an administrative nature in accordance with the California Heller Report. This report was also made available to the Constitution Study Committee appointed in conformity with Resolution 2 passed by this House in April of 1957. This special committee will report to the House of Delegates at this session and will make specific recommendations for organizational changes in the C.M.A.

In my opinion the California Heller Report has been of great assistance in high-lighting opportunities to improve the administrative and organizational structure of our Association. After careful consideration of this report by the House, the major problems in these fields should be settled satisfactorily for the present and a blueprint will be available as a guide for the future. I believe this entire situation was handled in an intelligent, efficient and business-like manner which should serve as a pattern for solving similar problems.

In conformity with these same business principles, a building was purchased in San Francisco in November of 1957 to permit future expansion of our rapidly growing central office. With this purchase, space requirements should prove satisfactory for many years.

II. *Communication*

With the rapid growth of an organization as large as the C.M.A. it is obvious that our lines of communication must be under constant scrutiny with a view toward making the transmission of information to individual physicians as perfect as is humanly possible. Recently a communications failure occurred during negotiations on the Public Assistance Program when information from the C.M.A. central office, after being forwarded to county medical societies, in some instances stopped at top county levels and was not transmitted to individual physicians.

Subsequently these methods of communications were improved but additional techniques remain to be utilized. For example, the basic function of county medical societies is changing rapidly since both specialty organizations and general practitioners now arrange scientific sessions at which subjects of special interest to their particular group are discussed. Hospital staff meetings likewise emphasize scientific problems as they relate specifically to hospitals. Consequently, county society meetings are frequently poorly attended, since subjects of widespread interest are limited. It would appear logical for county societies to gradually vary their programs so that more subjects of a medico-politico-economic nature are discussed. Debating these issues should generate ideas, stimulate interest, increase attendance and disseminate information in a manner which should be of important benefit to medicine. In addition, more data should be included in society bulletins of a medico-economic, medico-legal and political nature. Finally, the organizational sections of state and national journals should be followed by physicians with the same interest as the scientific portions.

The Heller Report suggested additional avenues for improving communications by arranging local meetings of C.M.A. alternates and delegates with District Councilors between the regular meetings of the House of Delegates. Conferences between these delegates and the District Councilor should serve as a "two-way street" by which local societies can become better informed of the C.M.A. activities and the Council in turn can keep more closely in touch with "grass root" opinions.

All of these suggestions should prove helpful in remedying the C.M.A. communications problem and additional methods may be devised by further observation and analysis of deficiencies.

III. *Medical Fees*

Bargaining with the state and federal governments and with various insurance carriers over medical fees is becoming increasingly important to medicine and, as would be expected, has aroused widespread criticism and controversy throughout the profession. Many physicians believe they are allowed no part in these deliberations in spite of the fact that their elected representatives do the actual bargaining. However, there may be some justification for this feeling among physicians that they have no voice at the bargaining table and, although there is no simple answer to this criticism, a remedy must be found.

The most recent attempt in California to arrive at a median fee for physicians occurred three years ago. Since that time many inflationary changes in the national economy have occurred and a new and more realistic survey of median fees in California is necessary immediately. Hereafter this survey should be conducted on a yearly basis in order to keep this data up-to-date. Unit values should be adjusted to the second edition of the Relative Value Study in accordance with the findings of these surveys which should represent the average fees charged by physicians in California.

In addition, at least one county society meeting each year should be devoted solely to a discussion of medico-economic problems at which the County Fee Schedule Committee should present the findings of the local yearly survey and should encourage discussion of these fees by individual physicians. The results of these deliberations should then be made available to the C.M.A. Medical Services Commission and should be given careful consideration in arriving at a median fee for the C.M.A.

The Council of the C.M.A. should set no medical fees in future except in an emergency, and then the fees should be of a temporary nature and should apply only until such time as they can be fully discussed in reference committees by the elected delegates from each society. You may be assured that the Council will gladly relinquish this task. Delegates should be given full opportunity to analyze these schedules and to officially vote their approval or disapproval at the House of Delegates meeting.

From a technical standpoint this procedure has been followed in general in the past, but opportunities for individual participation in fee determinations must now be stressed. Each physician should be encouraged to discuss fees individually and freely at his county society meeting. His elected representatives should present these views before the proper reference committee and later should make the final official decision. With this procedure no physician could justly feel that he had no voice in the establishment of his fees. This method may seem cumbersome and costly but no amount of time, effort or expense should be spared in solving this extremely important problem in intra-professional relations.

IV. *Professional Liability*

This problem is among the most important that faces medicine today. If some solution is not found shortly, scientific medical progress will be jeopardized. Many approaches to the professional liability problem have been attempted, some of which have proved valuable and others have failed. Psychological studies, which investigated attitudes in the causation of suits, were extremely interesting and for a time appeared to offer definite answers to this problem. However, the action program based on these psychological studies did not prove as valuable as anticipated and this approach does not now appear to be a major factor in the solution of the practical aspects of professional liability. Jury studies being conducted by the Medical Review and Advisory Board may clarify certain aspects of this complicated problem.

Claims prevention programs in hospitals through active tissue and record committees, through efficient supervision of hospital professional work and through education of the physician in avoiding the pitfalls in medical practice should assist in reducing the number of professional liability claims. These are the basic tools over which the profession has control. More positive use must be made of these corrective powers in order to lower professional liability actions and to raise the standards of medical care to the public. More recently the limited use of pre-trial examinations has proved beneficial in eliminating unreasonable and unjustifiable suits. Impartial panels of medical experts are now being selected in each county throughout the state to assure that competent medical testimony will be available to attorneys at all times.

Medicine must realize that the public is not concerned with the professional liability situation and that this problem must be settled by the profession itself. However, if every physician would become medico-legal minded and would learn to give careful consideration to the professional liability features of a case, along with its scientific aspects, the major portion of this problem would be solved. Postgraduate courses now being given in these subjects should prove helpful in attaining this aim.

V. *The Third Party Problem*

One of the most important and most highly controversial subjects in medicine today is the "third party" problem. This is a general term applied to any group which intervenes between a patient and his physician in rendering medical care. The "third party" usually consists of an insurance company, a prepaid group-practice organization, a union health and welfare plan or a governmental program. This subject has become so acute that five states introduced separate resolutions into the A.M.A. House of Delegates last June in an attempt to resolve differences of opinion involving medical care under union health and welfare funds derived from "fringe benefits."

Let me give you a few figures to help you decide for yourselves the importance of "third party" intervention in medical affairs. The annual report of the Health Insurance Council states that almost three and two-thirds billions of dollars were handled in health claims by third parties during 1956. In other words, doctors have been separated from their patients financially and hospitals have been forced to deal with intervening groups to the tune of that amount. "Third party" contracts handle ten million dollars in medical and hospital care daily in this country. In California it can be reasonably estimated that one million dollars per day is paid by third parties. It can be stated positively that these amounts will increase, not decrease.

Who controls these funds, how they are handled and how they affect the quality and quantity of medical care, are questions of vital concern to the medical profession. Blue Cross, Blue Shield, commercial carriers and certain state and governmental programs are considered less controversial than other plans which involve prepaid, closed-panel systems and which attempt to control medical practice. Medicine can logically expect increasing competition from prepaid group-practice organizations and union health and welfare plans. In an attempt to resolve differences of opinion between medicine, on the one hand, and labor and industry on the other, over "third party" relationships, the A.M.A. House of Delegates in June of 1957 adopted three basic principles covering the treatment of patients under the U.M.W.A.F. They intend to develop similar guides in the future for other closed-panel groups. These principles are:

1. Free choice of physician and hospital.
2. Fee-for-service.
3. Liaison from below upward.

These fundamental principles represent medicine's answer to competition from closed-panel systems and union health and welfare plans in general and will form the basis for future negotiations in national controversies involving these groups. Every physician should subscribe wholeheartedly to these principles which aim to maintain high standards in the practice of medicine.

Labor consultants made certain requests in California in April of 1957 which can be summarized briefly as follows: (1) Complete medical care, preferably on a service principle. (2) Certainty of coverage. (3) Fee schedules for competitive bidding among insurance companies. (4) Low administrative costs (2 to 3 per cent). (5) Premiums which they consider reasonable.

The C.M.A. Council on July 13, 1957, answered the above requests and stated that they had no authority to dictate to members, that service plans such as CPS could be recommended only where inadequate income was involved, that relative value fee studies could be used, that public service committees should be consulted when disputes occurred and that discussions between labor and medicine should be continued.

Meanwhile, there are signs that California labor leaders are becoming more familiar with problems involving the medical care of their members and that California medical leaders are learning the value of continuing discussion and deliberation at state level. For these reasons both groups are approaching more closely although there still remains a considerable gap between them.

Both medicine and labor aspire to the identical time-honored goal, namely, "the best medical care at a price which every patient can afford to pay." However, medicine has continuously stressed quality in medical care, while some labor leaders have favored salaried "captive physicians" in the employ of prepaid closed-panel groups, chiefly because of their apparent low cost. The acceptance of major medical, co-insurance and deductible features in insurance contracts would rapidly narrow the gap of misunderstanding between labor and medicine. In fact, this disagreement and the refusal of labor leaders to use public service committees represent our major stumbling blocks at present.

Suits are on file in Colorado and Ohio to determine whether physicians or labor leaders will control medical society membership and the outcome of these court deliberations will help to decide medical standards for the future.

However, many enlightened consultants for labor health and welfare plans have accepted basic medical principles and, with continued discussion and experimentation, it is not unreasonable to hope that labor leaders themselves will gradually follow the advice of these consultants and make medical decisions on the basis of what is best for their members. In my opinion, continued negotiations with those consultants who control labor's health and welfare funds offer greater hope for a satisfactory settlement of this problem than prolonged discussion with less informed labor leaders. The C.M.A. Council is willing and desirous of cooperating along these lines in order to solve this extremely important and complex problem.

VI. *Government-Financed Medical Care*

Socialism may be defined briefly as the public collective ownership of land and capital and the public collective control over individuals, industries and professions. Veterans with service-connected disability, a large proportion of the dependents of military personnel and all public assistance and indigent cases have been socialized for medical care under this definition for many years. They look toward public collective management, *i.e.*, government, for this care; and government in making these groups, among many others, wards of the state has accepted this responsibility insofar as their medical needs are concerned. Three government-financed medical care plans are in effect (or are being considered) in California, namely, the Home Town care of Veterans Program, "Medicare" and the Public Assistance Plan. These specific groups formerly were treated medically by salaried physicians in Veterans' hospitals, by military personnel, by interns, residents and other physicians employed by the city, county or other political subdivisions and by volunteer physicians.

More recently government has made certain changes in the handling of the medical treatment of these dependents. Under federal law, private practitioners of medicine can now participate in the care of groups which formerly were treated by salaried physicians. Certain specific restrictions have been imposed by government on this medical care, including the type and amount of coverage, fees for professional services and the total money available for diagnosis and treatment. The government calls the tune, pays the bills and demands the usual excessive red tape, paperwork and regimentation.

Nevertheless, there are certain features in this new relationship with government which should be given careful consideration by medicine. For example, free choice of physician and fee-for-service are permitted, physicians individually and collectively can accept or reject these programs, medicine is allowed to select its own administrative agent in most cases and can bargain collectively for fees. These government-financed medical care plans for limited segments of the population have increased the total pool of individuals available for private practice and have transferred patients from public clinics and hospitals to the offices of private practitioners.

Although 19 million dollars previously had been allocated yearly in California for this program, the addition of 29 million dollars specifically earmarked for categorical medical care undoubtedly represents an extension of socialization in a program which in 1956 cost the state government approximately 375 million dollars. Furthermore, the lack of adequate funds to render complete medical care to these recipients necessitates excessive regimentation by the State Welfare Department.

For these and other reasons, many physicians consider that these programs represent a serious encroachment of socialization in medicine. Is this a valid conclusion? If so, then we discover several amazing paradoxes. The Veterans Administration looks with extreme disfavor on the Home Town Care of Veterans Program for obvious reasons and has managed through devious methods to eliminate this plan in all but eight states and Hawaii. Medicine, on the other hand, favors this program and the A.M.A. is attempting to extend its scope to additional states. Thus we have the strange paradox, if this veteran's care plan is truly socialistic, of seeing the government vigorously oppose socialism and the medical profession with equal vigor favor socialistic encroachment. Obviously this isn't reasonable. Opposition to "Medicare" by private practitioners will restore the care of military dependents to salaried physicians in service under government control. Lack of medical support for the Public Assistance Program will return these recipients to county clinics under salaried physicians or the State Welfare Department will be forced to employ physicians on salary in geriatric or pediatric clinics. For these reasons medicine can, if it so desires, exercise partial control over these programs.

However, there are many aspects of these plans with which many physicians disagree and others of which they heartily disapprove. In addition they dislike the excessive paperwork, the obviously inadequate fees, the governmental regimentation and the red tape and many of the annoying and frustrating characteristics of these plans. Nevertheless, I sincerely believe, from discussing these programs with many county medical societies and many individual physicians, that the chief opposition to these plans lies in the basic distrust of government by medical men and the sincere fear that medicine will eventually be socialized through these programs. Unquestionably there is justification for this concern.

However, let's consider these plans collectively as vehicles for the gradual extension of socialism in medicine by government. There can be no doubt but that government is gaining actuarial and statistical data from these plans which will prove extremely helpful to politicians in advancing future socialistic medical programs. Nevertheless, I sincerely doubt that medicine need fear socialization from these arrangements for definite, practical, economic and political reasons with which all physicians should be thoroughly familiar.

In order to understand this situation clearly it is necessary to take a quick look at the Social Security Act. This law became effective in 1936 and is divided into two portions: Title I, Old Age Security (O.A.S.) and Title II, Old Age and Survivors Insurance (O.A.S.I.). In my opinion medicines' main battle must be directed against O.A.S.I. rather than against O.A.S. for specific reasons which require further discussion.

First, let's consider O.A.S. Politicians realize that the American public does not want regimented medical care and that to bring it about they must resort to piecemeal, indirect and devious legislation. Taxpayers as a whole are forced to support charity welfare plans under O.A.S., and increases in the public assistance funds must come from the taxpayer's pocket. Increasing taxation is a technique which is obviously unpopular with the American taxpayer especially at the present time, consequently politicians prefer to avoid this method if possible.

On the other hand, under O.A.S.I. the employee pays a portion of the cost, the employer a similar amount; and, unknown to the American taxpayer, he underwrites the entire plan through hidden taxes. This so-called "insurance" scheme covers virtually every employee and employer in this country, together with the dependents of employees and excludes only physicians and certain governmental workers. Minor amendments to Title II of the Social Security Act (O.A.S.I.) by Congress at each session could gradually result in the socialization of medicine without the actual knowledge of or undue concern or criticism from the major portion of the American public. These amendments are readily added to law since the familiar argument is used that the individual is paying the cost himself and therefore is definitely entitled to all these benefits "by right."

Anyone who questions the above opinion can find a ready answer in the token resistance, consisting of one letter, offered by the A.M.A. against the Long Amendment to HR 7225 (the Public Assistance program under O.A.S.), in comparison with the extremely vigorous fight staged by the A.M.A. against the George Amendment to HR 7225 (cash disability at age 50 under O.A.S.I.) and in the active opposition now being organized by medicine against the Forand Bill (also under O.A.S.I.).

Every physician must obtain a clear-cut picture of these programs at present and must understand their significance to the practice of medicine in future. Basically these three federally-financed medical care plans are identical in principle and must be considered as one unit.

This House of Delegates finds itself on the horns of a dilemma and must decide either to oppose in principle the three federally-financed plans presently in effect in this state and draw the line at that level or to accept the basic philosophy of these programs and battle against further governmental encroachment and intervention by actively opposing future amendments to O.A.S.I. If this House of Delegates should decide to oppose only one of these plans, for example, the Public Assistance Program, then it should, in order to be factual and consistent, make a careful distinction between opposition "in principle" and opposition due to "unnecessary regimentation, excessive paperwork, inadequate fees or political expediency." Furthermore, physicians must realize that they can hardly favor free choice of physicians and fee-for-service in principle for the general public and oppose free choice and fee-for-service for indigents.

This problem should not be decided on the basis of our present annoyances, frustrations and prejudices but must be considered from an unemotional, realistic, practical, long-range viewpoint in which the future relationship of this plan to medicine's battle against socialism is carefully weighed and critically evaluated.

VII. *Encroaching Socialism*

If medicine eventually becomes socialized, it will occur through increasing amendments to the Social Security Act, Title II, O.A.S.I. for reasons already outlined. Consequently, it is extremely important that medicine scrutinize any suggested amendments to this legislation.

The first and most important change in this Act, from a medical viewpoint, occurred with the passage of the George Amendment to HR 7225 in 1956 by two votes over the vigorous opposition of the medical profession. This law permits the payment of cash for total and permanent disability at age 60 rather than at age 65. In other words, physical disability has been singled out as a reason for the payment of social security allotments at the earlier date. At first glance this may not seem very important but on more careful analysis it will be found to represent the greatest legislative defeat suffered by medicine in our time. Adequate definition of the word "disability" is difficult and its interpretation can be easily changed by future legislative amendments. In addition, the word "permanent" can be readily changed to "partial or temporary" and the government can then demand proof of this disability by physical examination. At first, these examinations would be paid for by the patient and eventually by the government. From this brief outline the serious menace of the legislation becomes obvious.

Another attempt will be made by socializers this year to encroach still further upon the practice of medicine. The Forand Bill, HR 9497, introduced on July 24, 1957, is a proposed amendment to Title II, O.A.S.I. which would, among other changes, initiate hospital, nursing care and surgical payments for persons eligible for retirement or survivorship benefits under O.A.S.I.

This bill has the active endorsement of the CIO and AFL unions and the surgical portion of the proposal appears to be based on the experience of the UMWAF in five different states. This proposed legislation will be discussed in detail by the A.M.A. and C.M.A. legislative committees, so it will not be considered further except to outline an improvement in plans for opposing this type of legislation in California.

The Council, in agreement with recommendations of the Heller Report, has advised District Councilors and county society delegates and alternates to cooperate more closely and actively with the C.M.A. Legislative Committee and with county legislative committees in publicizing medicine's opposition to the proposed legislation and in bringing medicine's opinion to lay groups such as civic, church and educational associations, insurance, industrial and financial organizations and laborers, veterans and other taxpayers.

According to the reliable *Wall Street Journal*, "Over 100 lawmakers of both parties have dropped benefit-boosting bills into Congressional hoppers since last January." In our zeal to oppose the Forand Bill we must not lose sight of other amendments to O.A.S.I. in the medical field, which, if enacted into law, might permit government to advance further along the road toward socialization.

In Conclusion

The recent controversy over the Public Assistance Program has aroused physicians in this state to the vital importance of national and state legislation to medicine. At no time during the past thirty years has the profession in California been so stimulated politically except during the 1945 campaign when it opposed the then Governor Warren in his unsuccessful effort to force medicine into socialization. While the reasons for this recent controversy were unfortunate, there remains a silver lining to the cloud in the sudden awareness and active opposition on the part of the profession to further socialistic proposals by government.

In discussions with county medical societies during the past two years, I have endeavored to stress those principles which must be emphasized by physicians individually if medicine hopes to continue as a reasonably independent profession. These responsibilities underlie many of our major problems and bear repetition.

1. It is becoming more evident daily in the present political struggle for power between labor, industry and government that medicine is being "caught in the middle" and can survive, as we know it, only if we are a highly organized group. The medical profession, according to the politician, is so small numerically that we are unable to exercise

important power at the ballot box. Therefore, physicians must demonstrate to the public both by precept and by education the benefits derived from freedom in the practice of medicine. We must decide what is best for those we serve and then follow a specific course irrespective of all obstacles. We must use the influence of this group to determine the social and economic conditions under which our services are rendered.

2. Since medicine is rapidly being forced into the world of commerce, we must accept the bargaining tools of trade and learn to use them intelligently. We must cooperate fully within the profession in order to bargain successfully and to assist in establishing those principles for which we stand. What is good for the individual physician is not necessarily good for medicine; whereas what is good for medicine is always good for the individual physician. It is essential that we assume these responsibilities in order to render the finest medical care to the public in the present rapidly changing social and economic climate.

3. Medicine, if it is to protect the public, must continue to insist on its two great fundamental principles, namely, fee-for-service and free choice of physician and hospital. These are the basic principles which have made American medicine great.

While we as physicians are confronted with grave problems and vast responsibilities, we are also presented with broad opportunities and a great challenge. The advancement of medicine as a science will depend to a great extent upon how well we meet this challenge. (Applause.)

Speaker Doyle: Thank you, Dr. MacDonald.

PRESENTATION OF FIFTY-YEAR AWARDS

Awards of pins commemorating 50 years of membership in the California Medical Association were made to the following physicians:

Dr. William P. Byron, Lemoore, Kings County.

Dr. Edith E. Johnson, Palo Alto, Santa Clara County.

Dr. A. W. Connor, San Jose, Santa Clara County.

STUDENT A.M.A. REPRESENTATIVES

The following representatives from California medical schools to the Student American Medical Association were introduced:

From the University of California: Henry Ralston, Jr., and Thomas Moyers.

From Stanford University School of Medicine: Wilmer Allen and Charles Hewl.

From the College of Medical Evangelists: Eugene Shakespeare and Fritz Westerhout.

From the University of California at Los Angeles: Carl Younger, national vice-president, Student American Medical Association; Harold Allen and E. Conway Stratford, Jr.

From the University of Southern California: Joseph Krofcheck and Richard Goode.

SUPPLEMENTAL REPORTS

The Speaker called for supplemental reports, beyond those made by various officers and committee chairmen in the Pre-Convention Bulletin, and the following reports were given:

REPORT OF LEGAL COUNSEL

Mr. Howard Hassard

Mr. Speaker and members of the House of Delegates:

This supplemental report is caused by the time lapse between preparation of our written report in January and several major issues of medical policy that have come to the fore since the first of the year. This report will be in the nature of a summation of the legal position of the profession in relation to economic as distinguished from professional problems in medicine.

In the immediate past these specific events have occurred:

1. A federal court has recently held that an Arkansas physician denied membership in his local county medical society could not invoke the Sherman Anti-Trust Act. There was no question of contract practice nor was a third party payment plan involved. The physician was a solo practitioner. The court held that the practice of medicine is neither trade nor commerce, and that if the denial of membership did interfere with the physician's practice such interference would not cast any burden on interstate commerce.

The case establishes that the practice of medicine *per se* is a profession, not a business, and hence is not within the ambit of the anti-trust laws.

2. At the same time two physicians in Colorado have commenced a $75,000 damage suit against a county medical society, claiming a restraint unlawful under the anti-trust laws, in that they were denied membership by the society on the ground that they participated in the United Mine Workers health plan. As you know, the United Mine Workers have a large fund for the payment of hospital costs and physicians' services incurred by miners and their families. At first, the Mine Workers fund permitted free choice of hospital and free choice of physician. In recent years, however, the fund has imposed re-

strictions on freedom of choice, and in various areas of the United States the medical profession has reacted aggressively as could be expected, in opposition to limiting patients' prerogatives. One weapon claimed to have been utilized to combat the Mine Workers fund has been society membership. *Life* magazine's issue of April 21, 1958, portrays the dispute and states: "Medical societies have begun denying membership and hospital privileges to U.M.W. doctors . . . doctors caught in between took their troubles to court."

While California lacks coal deposits and therefore is not directly concerned in the Mine Workers dispute, nevertheless all physicians throughout the United States are indirectly concerned, in that once again the issue is clearly raised as to what steps the profession may lawfully take to combat an economic force which medicine considers inimical to its economic interests.

3. In recent months our office has been questioned several times by physicians and medical groups as to whether organized medicine could improve its legal latitude in combatting economic encroachments, whether by government or private interests, through utilization of a labor union form of organization.

Frequently in recent months we have been asked to express an opinion as to the lawfulness of organized "non-participation" in a governmental program of medical care.

Due to these events I believe it timely, and I hope helpful in your deliberations, for me once again to review the status of medicine (regardless of how organized) under the anti-trust laws, and to define to the extent possible the boundaries of the playing field.

Basically, the anti-trust laws were enacted to protect free competition in all business activities. The motive was to protect the right of all Americans to improve their economic status without destruction by more powerfully entrenched competitive forces.

When medicine was practiced on a fee-for-service basis, and only the doctor and patient were involved in both the physician's services and the patient's obligation to pay therefor, there could be no destruction of competition arising from such relationship, and hence the physician and the anti-trust laws were strangers, and neither was concerned with the other.

However, when patients commenced to protect their economic interests by arranging for payment of the physician's fee through group action, an entirely different situation arose. The group arrangements for payment are an economic mechanism, not a professional matter; and such group arrangements, no matter what form they utilize, constitute businesses and as such are protected by the anti-trust laws against outside destruction. In this situation the practice of medicine *per se* is not the subject matter; the subject matter is the business of financing the costs of medical care.

Medicine first ran afoul of this fact in the early '40's when the American Medical Association and the Medical Society of the District of Columbia were proceeded against criminally by the United States Department of Justice. Parenthetically, I should emphasize that violation of the anti-trust laws is a crime as well as a wrong that can be the subject of a very expensive damage suit.

The A.M.A. case reached the United States Supreme Court. That court upheld a criminal conviction of the A.M.A. and the local medical society, because the court found that the A.M.A. by coercive tactics had attempted to destroy the business of a closed panel organization known as Group Health, Inc. The coercive methods used included ostracizing any physician who worked for Group Health, denying him county society membership, and closing hospital staff privileges to him. The Supreme Court said that it needn't decide whether the practice of medicine is subject to the anti-trust laws, because that was not the question involved. It said that the real question was whether the business of paying the costs of medical care was within the protection of the anti-trust laws; and the court's answer was Yes.

The court held—and this is now the law of the land—that a medical society to attain its economic objective may use reasoned persuasion but may not resort to coercion, either of its own members or others. The court said:

"If the District Society, acting only to protect its organization, regulate fair dealing amongst its members, and maintain and advance the standards of medical practice, adopted reasonable rules and measures to those ends, not calculated to restrain Group Health, there would be no guilt . . ."

May I emphasize, medicine may promote its economic view by reasoned persuasion, but if it resorts to coercion it may and has run counter to the nation's anti-trust laws.

The next medical anti-trust case to reach the United States Supreme Court was the other way 'round. It was an action brought by the United States Department of Justice against the Oregon State Medical Society to enjoin the Oregon Society from, among other things, continuing to sponsor Oregon Physicians' Service, the Blue Shield plan in Oregon, on terms different than were accorded commercial organizations. Here the Supreme Court said that medicine, far from interfering with economic competition, was itself engaging in such competition and was doing so on a lawful and fair basis. The decision was in favor of the Oregon Society.

I should add that the evidence in the case established that the physicians had not engaged in coercive tactics against the contract practice associations operating in that state.

There have been several other anti-trust cases involving medicine, in Washington, Minnesota, Oklahoma and San Diego, but they merely serve to confirm the pattern established by the United States Supreme Court.

In the field of economics and in the business of financing the costs of medical care as the courts have ruled, medicine may reason and persuade but it may not resort to force, coercion, retaliation or duress.

This restriction on medicine's economic power has caused physicians to wonder from time to time whether medicine wouldn't be more effective if it were organized as a labor union. This query presupposes that labor unions are above the law. They are not. It is true that by statute and by court decision labor has won the legal right to engage in a strike against an employer for the purpose of improving wages and working conditions. True, any strike is a restraint on the business of the employer. But the right of labor to strike is not unlimited; labor's right is expressly confined to the employer-employee relationship and to the dual purposes of wages and working conditions. Whenever the strike weapon is used beyond these limited purposes, the courts have interfered and will interfere. In addition, when unions use their economic power outside of the authorized strike area to injure someone's business, they are liable under the anti-trust laws, and there are many cases in which unions have been found guilty of anti-trust violations.

The very pattern of the practice of medicine makes it impossible for medicine to fit into the collective bargaining strike zone of labor unions. By whom are physicians employed? If there is an employer, it is each and every patient. Against whom, then, could physicians strike? In all other areas the anti-trust laws would apply to medicine, whether organized as a medical society or a union.

Finally, I come to the question of governmental programs. With respect to the government, organized labor's right to strike is denied. Under the Taft-Hartley law it is unlawful for any government employee to participate in a strike against the government. Under the federal and California labor relations laws, public employees, whether federal, state or local, do not have any right to engage in collective bargaining. These restrictions probably had their origin in the disastrous railroad strikes that occurred immediately after World War I when the railroads were being operated by the United States governmental agencies. In any event, the right to strike against the government is, in a word, nonexistent.

This does not mean that in programs of medical care financed by the government individual physicians are forced to participate. Each physician may accept or not accept a government-financed patient as his own judgment and conscience dictates. But organized coercion to force physicians to act collectively for the purpose of destroying a lawfully established government medical program would, in my judgment, run afoul of the same public policy that denies to the employees of the government the right to strike against the government.

I think it is necessary to conclude that the union form of organization is unlikely to give medicine any wider legal latitude either in relation to private businesses or the government, than is now possessed by the profession. I suspect that in the field of economics medicine will, of necessity, have to live within the rule laid down by the United States Supreme Court, which I may oversimplify as follows: Persuasion—Yes; Coercion, No. (Applause.)

SUPPLEMENTAL REPORT OF THE COUNCIL

Dr. Donald D. Lum, *Chairman*

Mr. Speaker and members of the House of Delegates:

The *Annual Reports Bulletin* which you have before you contains the Report of the Council as prepared several months ago.

At this time the Council will report on additional items which have come before the Council since the original report was prepared or have been decided subsequently.

First is the matter of resolutions referred to the Council by the 1957 House of Delegates or indirectly so referred by the language of the resolution.

Three resolutions were referred directly to the Council by this House in 1957.

One of these, Resolution 8, Claude Calloway of San Francisco, author, urged that medically indigent patients who are beneficiaries of public welfare benefits be treated through private physicians and clinics associated with teaching institutions. The Council followed the intent of this resolution in its dealings with the State Department of Public Welfare under the new Public Welfare Assistance Law, legislation for which was passed shortly after the 1957 meeting of this House.

Resolution 38, Leon P. Fox of Santa Clara County, author, asked that nurse educators be impressed with the need of more bedside teaching. At the time this resolution was before the members of this House, legislation was progressing in Sacramento which has subsequently established a shortened nurse training course for recognition for registration. This legislation is for an experimental period of five years, during which time there will be an opportunity to evaluate the efficacy of nurse training under a two-year program. The Council will follow the progress of this program and consider steps to be taken at any time in regard to it.

Resolution 40, J. P. Sampson of Los Angeles County, author, urged opposition to legislation which would lower the standards for foreign medical school graduates seeking to practice here. The Council has consistently opposed this type of legislation and has worked to maintain our high standards. A new organization, the National Council for Foreign Medical Graduates, has now been established by the American Medical Association, American Hospital Association and other recognized groups to provide a screening procedure for foreign medical school graduates. Time will be needed to determine the effectiveness of this screening procedure but it is obvious that it will give at least some indication of the qualifications of those who seek to come here from other countries and will eliminate those who are patently unfit to practice in California.

In addition to these resolutions sent directly to the Council, six other resolutions last year called for Council consideration.

Resolution 9, Donald M. Campbell of San Francisco, author, asked the development of a department and personnel in the Association to represent the C.M.A. before various bodies. The Council deferred decision on this matter until the Heller Report became available. Since that time the Association's staff has been augmented and a start made in the direction of the intent of this resolution.

Resolution 14, Burt L. Davis of Santa Clara County, author, asked consideration of legislation which would provide for the establishment of knowledge of the actual cost of injuries in court cases involving personal injuries. In view of the late date at which this resolution was adopted and the nearness of adjournment of the 1957 state legislative session, such legislation must necessarily be deferred until 1959. However, it is worthy of note that an interim committee of the State Assembly is currently inquiring into this field and has been furnished a copy of Doctor Davis' resolution for its consideration.

Resolution 10, Henry Gibbons of San Francisco, author, proposed that a staff be developed to implement the Committee on the Unlawful Practice of Medicine. Doctor Gibbons has appeared before the Council in support of this resolution and the subject remains open on the Council's calendar. However, it should be pointed out that there is a difference of opinion on this subject, based upon a consideration of the propriety of the Association's entering into activities which are currently the province of public law enforcement agencies.

Resolution 15, Grant Ellis of Alameda County, author, urged the establishment of a statewide hospital accreditation board for the promotion of advanced standards for our hospitals. Inasmuch as the Joint Commission for the Accreditation of Hospitals covers this field under standards which are applicable and are understood throughout the country, the Council did not feel that the establishment of a state board, to which the national organization would be considered in a secondary light, would represent much of value and might react unfavorably by debasing the national organization. Consequently, the Council has not taken any positive action on this proposal.

Resolution 25, Alf T. Haeren of San Mateo County, author, asked that opinion polls of the membership of the Association be taken on important matters. The Council is aware of the intent of this resolution and is prepared to utilize methods and facilities at its command when questions arise on such topics

Resolution 35, Clyde L. Boice of Santa Clara County, author, suggested that Council meetings be planned in various cities in the state so that local society officers might attend such meetings and better inform themselves on the deliberations of the Council. Two weeks ago the Council held its meeting in Sacramento, with officers of the county society present, and, while no schedule of such meetings can be announced at this time, the Council is aware of the benefits of such planning and will keep them in mind.

The Council also wishes to acquaint the members of this House of Delegates with the problem now faced in nominating candidates for election to the Board of Trustees of California Physicians' Service.

Under the C.P.S. By-Laws the Council is asked to nominate each year one candidate for each pending vacancy on the Board of Trustees and to place the names of these nominees in the hands of the members of this House 30 days in advance of the meeting. In addition, the Council is called upon to name three of its own members each year to serve a one-year term on this Board.

In view of the Constitutional Amendment which has been lying on the table for one year, and which will be voted upon later today, the composition of the Council during the coming year cannot be forecast at this time. It is most important that the three Trustees of C.P.S. named from the Council membership be carefully selected so that a direct liaison between the C.P.S. Board of Trustees and the C.M.A. Council can be maintained. At the same time, it is equally important that the other trustees, who will serve terms of three years each, be most carefully selected for their ability to serve C.P.S. well.

Because of the uncertainty as to the composition of next year's Council, and because of the importance of these nominations, the Council has not yet placed any nominations in your hands. When this House of Delegates has taken action on the Constitutional Amendment now lying on the table, the Council will be in a position to make such nominations and will do so.

The Council wishes to nominate for election to honorary membership by this House of Delegates one of our members who has devoted herself to the cause of medicine far beyond the normal call of duty.

Doctor Edith Mary Meyers of Alameda County graduated from University of California Medical School in 1926 and entered the practice of pediatrics, a specialty in which she subsequently became a certified specialist. In 1948 she retired from the active practice of private medicine but continued to devote herself to good medical works.

For the past ten years she has maintained an active membership in her local, state and national medical associations, has paid full dues and has given freely of her time, her talents and her funds in the interest of good medical care. She has served throughout this period as head of the out-patient department of Children's Hospital of the East Bay, without recompense. She has served on the Council of the Alameda-Contra Costa Medical Association, has been chairman of that society's Child Welfare Committee, Credentials Committee and Advisory Board to Visiting Nurses, and a member of the Tuberculosis Committee.

Doctor Meyers has also, at her own expense, represented the society at the C.M.A. School Health Conferences and served on the Planning Committee for the School Health Conference held in Berkeley.

Honorary membership in the California Medical Association is seldom granted, and, on such occasions as it has, the recipient has always been a physician whose good deeds were outstanding. It is the sincere belief of the Council that Doctor Edith Mary Meyers qualifies for this honor and the Council respectfully nominates her for election by this House of Delegates to honorary membership.

The House of Delegates last year asked the Board of Trustees of California Physicians' Service and the Council to investigate the feasibility of providing members of California Physicians' Service with plastic identification cards. The Board of Trustees of C.P.S. did investigate this possibility and found the idea to be impractical because of an estimated cost of several hundred thousand dollars to provide the members with plastic identification cards and furnish physicians with equipment to handle such cards.

Finally, the Council has reviewed the various programs under which governmental units purchase medical services from physicians for various segments of the population. I am sure you have all been aware that during the past year the Council has been faced with numerous serious and very perplexing problems.

I would like, Mr. Speaker, to ask your permission to invite President-Elect West to discuss the thinking of the Council upon many of these matters.

SUPPLEMENTAL REPORT OF THE PRESIDENT-ELECT

Dr. Francis E. West

Mr. Speaker, members of the House of Delegates:

I have been instructed by the Council to address you concerning the problems of fees, service and indemnity type plans of prepaid medical insurance and the attitude of the Council toward these major issues. The tenor of this statement is the unanimous opinion of the Council; quite reasonably these are details which are open to much debate.

It is strongly felt that this House in the next few days must face certain issues and delineate policies to be followed. However, the Council, which sits in session at monthly intervals between the annual meetings of the House, would be derelict in its duty if the members failed to outline what has been the product of their experience during the past few years.

Perhaps if it were possible, we would be happy to renounce all third party fee arrangements and start over again, but we cannot. The Workmen's Compensation Act, Crippled Children's Program, Veterans Home Care Program, our own C.P.S., and "Medicare" make this as impracticable and untenable as it is unreasonable. Many of these programs operate with onerous rules and regulations, with fixed and frequently inadequate fees. And, in some instances, the question may arise whether there is even free choice of physician.

Since we cannot abrogate our position in relation to many of these plans, it becomes our responsibility to adjust our thinking and attempt to adopt general over-all policies which will be acceptable to the majority.

To aid in this undertaking, let us review some of our past actions.

In 1952 we had a C.P.S. Study Committee that faced these problems. After one and one-half years of diligent effort and some $50,000 expenditure, the committee made a definite recommendation to this

House. In 1954 Doctor Magoon read the report to you and it was received with standing acclamation. This committee recommended the Usual Fee Plan and indemnification as the basic type of medical insurance for general use.

A short time later, however, because of other problems, this House approved, as a temporary expedient, an increase in the income ceiling of C.P.S. to $6,000, which meant a service type insurance policy with a fixed (and, incidentally, low) fee schedule. Now these two actions seem to be fundamentally opposite fiscal policies and lead to confusion of both the public and the doctor.

The Council has not known for sure which of these actions—the Usual Fee Plan or the fixed fee service insurance plan—were to be followed. Meanwhile, there seemed to be instances where both plans were needed.

When the problem of "Medicare" came before the Council there were several men who on the basis of principle voted against accepting the program as offered, in that it was to be a service type plan with a fixed fee schedule administered by a government agency. However, "Medicare" was accepted and, in general, is being rather happily carried out by most doctors. Some of the complications, however, are now becoming apparent and we are beginning to harvest the results.

For instance, the Public Assistance Program is another government plan similar to "Medicare" but covering a different group of individuals, a somewhat different group of doctors, and with a slightly modified fee schedule; yet there are a tremendous amount of complaints.

These programs are part of one of the policies that medicine has been at least partially endorsing since 1939—that is, prepayment of premiums for the purchase of medical services, operated on a service type program with fixed fees.

At the present, we find ourselves at the end of a blind street. It seems we have now reached the point in logic—the conclusion—which inevitably follows once you accept a premise.

Every avenue we have followed for the past twenty or twenty-five years is converging to the point of putting a price on our service.

The report from the Public Relations Committee; the report from the Legislative Committee; the Medical Services Commission, and now the report from your Council—all arrive at this same conclusion: Medicine must face this problem of fees and the type of medical care insurance which we are all willing to recommend, to understand and abide by.

This problem of fees is intrinsic, because it is the product which becomes inevitable when one recommends prepaid medical care insurance. It makes little difference who handles the policy. When we endorse the principle of insurance as one method for the public to obtain their medical services, the people will then demand that we place a price on the service.

The only way to avoid discussing this problem of fees is to repudiate all previous actions and start anew. We on the Council do not feel that this can be done or that this House would want us to do so.

The Council feels we must face these issues squarely. We are aware the case is difficult and at times seems impossible, because it appears that by giving in we will ultimately be controlled. While the task is formidable, we must come to grips with the problem and set a realistic and reasonable policy that all of medicine, and the public, can understand and live by.

This House will have to face the fundamental issue of what we are going to do about fees.

The Council at this time would like to outline some thoughts for the benefit of your discussions.

We feel that probably there is no single complete answer to all aspects concerning fees. Confusion is great because we are speaking about many various government plans, the Workmen's Compensation Act and the general public, which includes both low income and adequate income groups.

For a logical approach, we would like to separate the problem into two component parts, one involving the adequate and other the inadequate income group. First, what can be done for substandard income groups, which would include: (1) Certain individuals who just do not have enough money to purchase adequate medical care; (2) certain employed groups with low incomes; and (3) certain governmental charges who are underprivileged.

It seems necessary to distinguish the group of governmental charges, as it would appear we are all going to be considered government charges under the Forand and similar bills. But there are certain governmental charges who are underprivileged. For years both medicine and the government have recognized these people and have given them medical care which probably is somewhat socialized. We prided ourselves on giving services not at reduced fees, but frequently for nothing. We have been proud to do this and we are sure most of us, if let alone, would continue to do so.

Then finally, there is a fourth category in the reduced income group—those who more recently have been taken care of to a great extent by the popular approach of the public agencies. These are people who are in need, with specific types of disease processes which are debilitating both physically and economically. This group could properly fall into the realm of substandard income, or the medically indigent.

These four groups are entitled to consideration by medicine; whether it is the fellow who is just not making enough money, or whether it is the charitable attempt of the public agency. Or, in some instances, the benevolent taxpayer wishes those less fortunate be offered additional medical care and is willing to have certain amounts of his tax dollars appropriated for this care.

We feel in these instances that the intent on the part of either the agency, the taxpayer, or the individual, is good, and perhaps medicine should be willing to talk to these people about giving them a service type contract which would have a fixed fee schedule, and in certain instances, where the need is properly evaluated, and meets the proper definition of medical indigency or substandard income, to reduce our rate of pay.

The degree of reduction should depend on the degree of need of the individual. In some instances perhaps, this should be negotiated, or would, of necessity, be negotiated.

This type of coverage with fixed fee is service type insurance. Ideally, it should be offered through our agency, C.P.S., because it is the only vehicle in which the doctor has agreed to a fixed fee schedule. Any deviation from this vehicle becomes dangerous because we then tend to do what has probably been a fault in our approach during the past few years; we commit the doctors of the state to a fee by moral suasion. The Council recognizes this fact and wishes to be relieved of this problem.

In the case of the Public Assistance Program, approximately $30,000,000 annually is being spent in California on medical services. No matter what fee schedule is set, some doctors would have to accept it as a means of maintaining their practices. Therefore, we should have plans which are previously decided to be acceptable to all physicians of the group who are obliged to serve these plans. C.P.S. would be the logical organization to implement these programs.

We do not believe there are many physicians who have any real serious misgivings about how medicine will cooperate in taking care of people who are truly indigent or really have inadequate incomes.

The benevolent attitude of medicine toward the indigent, toward the unfortunate, has not changed. There is no cause for concern about charity care, since all of us have been donating this, as have our predecessors from time immemorial.

What is of concern is the fear of dictation in the matter, and the manner of the delivery of this charity or near-charity care.

In other words, if we are to give our services on this basis, we believe we have every right to say how our services shall be given.

The second group on which medicine must take a definite stand in regard to fee arrangements is the adequate or standard income group. This is by far the largest segment of our medical practice, and it is this group which presents the greatest problem.

The Council feels the earlier report of the C.P.S. Study Committee is still good and that there is probably no reason to have it changed or to develop a new Study Committee.

There is no question that when medicine suggests and offers prepaid health insurance as the way for individuals to take care of their health needs, it becomes a responsibility of medicine to offer some degree of certainty of coverage per premium dollar. It just isn't fair to do otherwise. The people concerned in this adequate income group are: (1) People insured by private insurance companies; (2) people under certain C.P.S. contracts; (3) people under labor contracts, and (4) government employees and others who are not indigent and who do have adequate incomes. This latter group is very important, as we feel there will be a large number of people in the future under government contracts who will not justify our setting either a fixed fee or reduced fee schedule.

In this group, medicine must meet its problems; but it must not be caught in the tangle of working down from its usual or modal fee. We cannot therefore properly offer a statewide service type contract with a fixed fee schedule.

We are aware that, in spite of this fact, certain doctors in certain areas will do so; some closed panel groups will be formed, and some doctors will sign up with certain insurance companies to serve some plans. That is an individual problem. But medicine, as an organization, should maintain its dignity and preserve that which is best for the patient and the profession and refuse to sanction such programs.

For this normal income group we would favor the annual establishment by this House of Delegates of what is found, by thorough and continuing investigation, to be the usual or modal fee for medicine throughout the state, fully realizing and adequately stating, that this is a median or modal fee and that there will be higher and lower fees charged in certain areas by certain doctors and under certain circumstances. This, then, means that the C.M.A., as a group, cannot endorse a statewide service type insurance program for adequate income groups.

For these groups, plans could be written against what are the modal fees throughout the state, with the insured recognizing that the final charges represent differences in particular areas and differences in particular doctors. In cases of fee disputes, however, as suggested in 1954, the usual or modal fee would be accepted as standard unless the physician had discussed his charges with the patient in advance.

This suggested statewide policy would not restrict any county society from accepting any contract which it might wish to arrange locally, such as a service type plan with a ceiling income limit. It is proper, important and right to maintain local autonomy.

At present this is being done in Stockton and in Long Beach. And I understand it is to be developed in other areas where service type plans with adequate fee arrangements are provided to preferred risks. If the local societies want to do this and agree to it, there is no reason for the state association to be concerned.

This has been a rather prolonged discussion, but your Council feels that we are at the crossroads and we in medicine must make major decisions. If we repudiate all that we have done in the past, we thereby deny the fact that prepaid medical insurance is proper. Then, to be consistent, we should withdraw from C.P.S., Veterans' Home Town Programs, "Medicare," Public Assistance and Crippled Children's Care. Our alternative is to face the issue squarely and, as reasonable and intelligent members of society with a full realization of our responsibility to the public, our patients, resolve our present problems in a manner that befits the integrity of the profession and our proud record of humanitarian service! (Applause.)

REPORT OF C.P.S. BOARD OF TRUSTEES

DR. T. ERIC REYNOLDS, *President*

Mr. Speaker, members of the House, and guests:

This past year has been a busy one for California Physicians' Service, a year characterized by changes and challenges. This will be a short report in which I will attempt to put in capsule form the principal items which have concerned us and which I hope will interest you.

C.P.S. continues to have good physician support, as it should. There has not been a year since World War II in which the physician membership has failed to show an increase. Physician membership now stands at 13,767, a net gain of 109 over a year ago.

When C.P.S. was organized in 1939 by the C.M.A., one of the objectives set forth by its founders was that of providing a method by which the medical profession might provide medical care for special groups. In this way organized medicine has used C.P.S. when dealing with the government in the last ten or twelve years. Here is a "nutshell" review of such activities to date:

The first of such arrangements occurred in 1946 when the Veterans' Home Town Care Program was instituted. This program enabled a veteran with a service-connected disability to receive ambulatory care by a physician of his own choice in his own area, without traveling (sometimes for a long distance) to a government facility. C.P.S. was designated to administer this program for the physicians of California. This method of providing medical care has been helpful to, and popular with, veterans, largely because the program has been given the cooperation of the medical profession.

In December, 1956, the "Medicare" Program began here as a result of conferences between a committee from the C.M.A. and the Department of Defense. As a result, dependents of active duty servicemen can now receive in-hospital care by civilian physicians in nonmilitary hospitals. Once again C.P.S. was designated to act as the fiscal agent.

In each of these two instances the medical profession regarded these actions as forward steps by which further spread of the building of government hospitals was somewhat curbed. We believe that this is a sound medical principle and ultimately less expensive to taxpayers.

It was natural, therefore, that C.P.S. would again be called upon to act as fiscal agent by some counties when the Public Assistance Medical Care Program was instituted during this past year. Its functions are limited to receiving and processing bills and providing information, together with presenting complicated cases to county medical society review committees. These services are performed on a "no-profit, no-loss" basis as a public service. Thirty-five of the 58 county governments are availing themselves of this service. By an action of the Board of Trustees, no additional counties will be accepted for fiscal processing by C.P.S. unless specific request is made by both the county supervisors and the medical society of the county concerned. Functioning as a fiscal agent, C.P.S. can accumulate statistical data which we think will be of great value in the years to come. There is a distinct division of opinion regarding both the necessity for and the philosophy of contracting with the government to provide medical care for certain segments of the population. This is a matter for the considered judgment and decision of the House of Delegates. In any case, when the help of C.P.S. has been requested by medical organizations, it has been able to provide technical information and implementation.

Five years ago the Board of Trustees established a subsidiary corporation which is licensed to sell indemnity insurance. California Physicians' Insurance Corporation was incorporated in 1953. Approximately another year was required in securing approval from the California Insurance Department for specific policies. Some encouraging progress has been made, particularly in the last six months. This is a highly competitive field and when such coverage is required, buyers usually look to the commercial insurance industry for this product. So far the largest group which has purchased indemnity insurance from California Physicians' Insurance Corporation is the employees of Butte County, with approximately 400 persons.

Besides indemnity plans, this wholly owned C.P.S. subsidiary is offering two other plans. One is a major medical policy which becomes effective after the basic contract benefits are exhausted and after a deductible or "corridor" payment, usually set at $100, is made. The second offering by California Physicians' Insurance Corporation is a comprehensive deductible policy which pays, as an example, 80 per cent of the specified costs as soon as the contract holder has accumulated $100 of deductible medical expense. This type of major medical insurance is not based on any basic service coverage. The Relative Value list is being used in establishing fee schedules. It is fair to state that the subsidiary corporation, CPIC, has a somewhat brighter outlook than it has had heretofore.

Community rating versus experience rating continues to be a vexatious problem for all Blue Shield Plans. The natural tendency has been for commercial insurance carriers to select preferred risks, thereby leaving an important section of the people with the dilemma of having to pay more money for the same coverage, or accepting less coverage. It works like a cream separator. It is natural for any group to want the plan which offers the most benefits for their money. Larger groups are normally better risks and take advantage of the lower rates offered them. Smaller groups and individuals are adversely affected by this process. Whereas C.P.S. originally used the community rating concept which is basically the best for all people, it has been forced by competition to adopt experience rating for some, usually larger groups.

Very few commercial carriers offer any coverage for persons who are being retired. As the facts stand today, the Blue Shield and the Blue Cross plans are substantially the only programs through which it is possible for all subscribers to continue to receive protection when they retire due to age or leave work for other reasons. C.P.S. receives many letters of inquiry from people who are concerned that they might lose their protection when they need it most. Through the continued membership plan we can offer benefits which will not be cancelled because of age or heavy utilization of benefits. This feature has recently been of greater and greater interest to both management and labor and because of the spotlight which is now being turned on health insurance programs for the older age groups, it is a problem which will require the utmost in careful study and scrutiny by the medical profession, and particularly by its insurance "right arm."

Increasingly in recent times C.P.S. has emphasized the acquisition of individual members, as well as small groups, thereby offering protection to persons who might not otherwise be able to participate in prepaid medical care. Emphasis will continue in this area in the coming year.

During the year your Blue Shield Plan paid out more money for member benefits than ever before. It was necessary to dip into reserves in order to meet these obligations. Shortly after the annual meeting last year claims costs rose at an even faster rate than had been projected. Comparing our experience with that of other Blue Shield and Blue Cross plans as well as those of commercial carriers, we found that our situation was generally no different than that of other prepaid health plans throughout the country. Increased costs of hospitalization and greater utilization of benefits are the two main reasons for higher costs. The costs of hospital care reached an all-time high last year, and more C.P.S. members used their benefits, for one reason or another, than ever before. Even though California Physicians' Service is a nonprofit organization, it must remain solvent and have adequate reserves. Therefore, it was necessary to adjust dues. At the same time that contracts were converted we revised underwriting requirements by insisting on 75 per cent participation of individuals within groups in order to avoid self-selection against the carrier, which results in high loss ratios. Through these actions the stabilization reserves have been increased, so that once again they are in general agreement with the recommendations of the National Association of Insurance Commissioners.

The Board of Trustees has received many inquiries concerning a change in C.P.S. fee schedules. The last major change—there have been minor changes in the interim—took place when the B Schedule was adopted in 1955 to apply to the $6,000 income provision. On March 31, the last day of the fiscal year on which I am reporting, C.P.S. received word from the Los Angeles County Medical Association that the association had adopted a $5.00 coefficient based on the California relative fee list to apply to a new $7,200 income provision. Some of this new type of insurance is already in force. It is impossible to predict whether other counties will also wish to adopt this schedule at this point. If this is done, however, and the plan is purchased by most C.P.S. groups, it will eliminate, to a large extent, the complaints concerning inequities in the present schedule.

Because there is constant confusion on one point, it might be well to repeat this fact: Fee schedules are set by a C.M.A. committee, not by the C.P.S. Board. The Board's responsibility is to make sure that new schedules or proposed changes in existing schedules are within the ability of C.P.S. to meet and remain financially sound.

There has been great enthusiasm this last year by some physicians as well as by the insurance industry over the growth of major medical and comprehensive deductible plans. The Board has undertaken considerable study and discussion of the long-term effects of such programs. We share the opinion of many leaders in the insurance industry that an objective examination is now necessary, based on experience to date. This is now being done by insurance companies, but needs to be done also by Blue Shield plans. Physicians have a great responsibility as well as an interest in the ultimate future of this kind of protection.

C.P.S. now has a continuing study committee. Some members of the committee are from within the Board. Others are physicians who are recognized as students of the problems of medical insurance. It is my hope and considered opinion that this committee will serve, along with the other excellent committees of the California Physicians' Service, to continue to acquire and digest the rapidly changing aspects of this problem and continue to advise the medical profession on the best course of action to pursue.

I should like to take this opportunity to thank the members of the Board of Trustees for their valued and loyal support and to thank the many physicians of California who have made representations to C.P.S. in a sincere, constructive and earnest effort to improve its performance. I should also like to thank the administrative staff of the organization for its excellent performance, oftentimes requiring time spent beyond the usual call of duty. I believe that they have well earned a commendation for a job well done.

In closing, I would like to repeat some remarks I made a year ago. Physicians are individualists by nature and training. That is how they function best and we would like to keep them so, insofar as possible. Blue Shield offers this opportunity within the framework of democratic processes. The old adage about free men governing themselves applies equally well to a free profession. Physicians should not be complacent worker-ants in a medical ant colony, whether doctor-sponsored or not. In my opinion, at least, no one has suggested a satisfactory basic substitute for the often maligned physician-patient relationship.

Blue Shield is organized medicine's device for reconciling new economic concepts with traditional, personalized medical care. If we continue to make it work, we may preserve the kind of medicine we would like for ourselves and our families. If we don't make it work, there are plenty of interested parties to take over. It is not a job done. It is a job only begun. It is a continuing challenge. It is a lifeline of free medicine. (Applause.)

REPORT OF THE CONSTITUTION STUDY COMMITTEE

Dr. Sam J. McClendon

Mr. Speaker, members of the House of Delegates and guests: The Constitution Study Committee came into existence as a result of Resolution 2 adopted by the 1957 House of Delegates.

This resolution, introduced by Doctor Joseph M. de los Reyes of Los Angeles, called upon the Speaker of the House of Delegates to name a committee which would include representatives of all existing Councilor Districts. It also assigned four specific areas of study to the committee. In compliance with this resolution, your Speaker named a committee of eleven members, one from each Councilor District. This committee was assisted by the Speaker and Vice-Speaker of the House of Delegates, who attended its meetings, by Mr. Hassard as legal counsel, and by John Hunton, executive secretary.

The committee received advance material in the form of maps showing Councilor Districts, statistics on individual county society membership and district membership, a survey of how other state medical associations handled matters similar to those assigned to the committee and a digest of the comments of numerous medical leaders in California, including many past presidents and other officers of this Association.

Two meetings of the entire committee were held. In addition, a four-man subcommittee was assigned the task of studying some of the items on the committee agenda, and this group held one meeting.

The four subjects assigned to this committee by the House of Delegates for study were (1) proportional representation on the Council of the Association for all Councilor Districts; (2) reevaluation of the necessity for continuing the so-called "gentlemen's agreement" on the rotation of elected officers of the association; (3) the desirability of reducing the size of the House of Delegates; and (4) the method of selecting Delegates and Alternates from

California to the House of Delegates of the American Medical Association.

These items will be treated individually in this report.

The members of this House of Delegates should bear in mind that additional studies of some or all of these matters have been made during the past year by others. A constitutional amendment introduced in the 1957 House of Delegates has been lying on the table for the past year and has been published several times in the official journal so that all members could study it. It addition, the Council of the Association retained a firm of management engineers to study the operations and the structure of the Association, including all four items which were assigned to this committee by your action a year ago.

This report is made with a knowledge of the proposals offered by the management engineers, Robert Heller & Associates, and includes a full consideration of the proposal for proportional representation made by the constitutional amendment which awaits your decision at this meeting.

The first item assigned to the committee was the consideration of proportional representation by Councilor Districts on the Council of the California Medical Association. As proposed in the constitutional amendment upon which you will vote later today, the theory of proportional representation would be approved; Councilor Districts 3 and 4, both embracing Los Angeles County, would be consolidated into one district; all other Councilor Districts would remain in their present areas, and Councilors-at-Large would be eliminated. The amendment would call for the election by the Councilor District delegates to this House of Delegates of one Councilor for each 1,000 active members in the district and would prohibit any Councilor District from electing at any time more than forty (40) per cent of the total Council membership.

The committee reviewed the present and the prospective size of the Council, and the areas from which its members would be drawn under the proposed constitutional amendment and agreed that, with one further amendment, it would support this proposal. The further amendment would add the words "or major fraction thereof" to the proposed representation of one Councilor for each 1,000 active members. If this further amendment were added and the present proposed amendment, as further amended, were adopted, the one change in the Council as proposed under the present amendment would be to add one additional Councilor from San Francisco and to make it possible for one additional Councilor to be added from Alameda-Contra Costa Counties within the next two or three years.

Since legal counsel has ruled that the further amendment proposed by the committee could not be introduced legally into this House of Delegates for action at this time, the committee intends to support and recommend adoption of the constitutional amendment which will be voted on later today. It will then, under the heading of New Business in this House, introduce its further amendment if last year's proposed amendment is affirmatively acted upon. If the amendment now lying on the table is not voted affirmatively today, the committee will then introduce under New Business a proposed constitutional amendment which will incorporate the proposals made last year, add the additional amendment voted by the committee and make a few technical additions in the interest of clarity. This amendment would then lie on the table until the 1959 session, at which time it would be acted upon.

The second item given to this committee for study was the consideration of removing any geographical consideration in the election of officers of the Association. Under the so-called "gentlemen's agreement" which has prevailed for a number of years, the House of Delegates has rather consistently elected a Speaker and a Vice-Speaker of the House of Delegates from the Los Angeles County area. At the same time, the Council, which elects its own officers, has regularly chosen its chairman and its Auditing Committee chairman, who may also be elected chairman of the Executive Committee, from among its members in the San Francisco Bay area.

Any such arrangement as this so-called "gentlemen's agreement" is obviously a matter of compromise and is not fixed by inclusion in the Constitution and By-Laws of the Association. In past years this type of agreement has been challenged in this House of Delegates by members from other areas of the state who have felt that these elective offices should be available to any worthy candidate, no matter from which county he came.

In considering this question the committee did not feel that a fixed and arbitrary basis for election of officers by geographical areas would be desirable. Rather, it was the consensus of the committee that these offices should be open for the candidacy of any qualified member, regardless of his geographical location.

Inasmuch as there is no fixed policy in this regard in the Constitution and By-Laws, there is nothing formal which this committee can suggest be amended. However, it is the considered opinion of the committee that the Speaker and Vice-Speaker of the House of Delegates should be elected without regard to their geographical location and that the Council, in selecting its own chairman and the chairman of the Auditing Committee, should he also be named chairman of the Executive Committee, should follow the same principle. The committee believes that this principle, if followed, will contribute to a democratic administration of the Association's affairs and will make available to a greater number of members these official positions which carry with them prestige as well as responsibility.

On the question of the size of the House of Delegates, the committee considered arguments both pro and con. Those who favored retaining a large House of Delegates made the point that the more members there were in the House, the more there were to carry back to their constituents the details of what the House had accomplished. Those in favor of a smaller House pointed out that the present membership of 365 made this body unwieldy and, in fact, weighted the representation of the House in favor of some of the smallest societies, where a county society membership of possibly 12 members was entitled to two Delegates and two Alternates, or one-third of the entire society membership.

After considerable discussion, this question was resolved by the decision to recommend that each county society be represented in the House of Delegates by one Delegate and one Alternate for each one hundred (100) active members or major fraction thereof, with a minimum of one Delegate and one Alternate for each society. This would produce a House of Delegates of about 160 elected members, in contrast with 323 elected members at this time. With the addition of ex-officio members, including all members of the Council and the past presidents of the Association, a House of Delegates of 202 members would result. An amendment to the By-Laws to this effect will be placed before this House of Delegates.

The final item assigned to this committee was the method of selecting Delegates and Alternates to the American Medical Association. Discussion brought out the fact that the California delegation in the A.M.A. has been extremely influential in recent years and that every effort should be made to maintain that status.

It was the consensus of the committee that Delegates and Alternates to the A.M.A. represented the entire state and that the capacity of a member to give such representation was more important than the area from which he came. With this in mind, the committee agreed that nominations for Delegate and Alternate to the American Medical Association should be carefully considered before being placed before this House of Delegates. To assure the nominations of members whose qualifications would tend to fit them for such election, the committee voted to offer a By-Law amendment to provide for formation of a nominating committee to make nominations for each office of Delegate or Alternate to the A.M.A. This committee would consist of two members of this House of Delegates, two members of the Council and two of the present Delegates to the American Medical Association. The Speaker of this House would serve on the committee ex-officio, with authority to vote in case of a tie. Additional nominations would also be permitted from the floor. A By-Law amendment to accomplish this purpose will be before you for decision at this meeting.

As a final suggestion to this House of Delegates, the committee voted to recommend that a redistricting of the state be undertaken, to provide proper and proportional representation on the Council for each district. To accomplish this, the committee recommends that the Speaker of the House of Delegates name a committee to consider such redistricting in the coming year and to present its recommendations to the House at the 1959 Annual Session.

As chairman of the Constitution Study Committee, I wish to thank each of the members who gave thoughtful and serious consideration to the matters placed in the committee's hands. The committee members were, from the First District, your chairman; Carl Hadley from the Second District; Marden Alsberge and Jay J. Crane from the Third and Fourth Districts; James Moore from the Fifth, Robb Smith from the Sixth; Leslie B. Magoon from the Seventh; Matthew N. Hosmer from the Eighth; C. J. Attwood from the Ninth; Fred Olson from the Tenth and James Yant from the Eleventh District. (Applause).

REPORT OF COMMISSION ON PUBLIC POLICY

Dr. Dan O. Kilroy

Mr. Speaker, members of the House of Delegates:

My report will be a report of the Committee on Legislation, and will not cover the subject of public relations, which is one of the committees under the Commission on Public Policy.

Your Legislative Committee has been concerned, during the present year, with the activities of many committees of the California Legislature; with the current budget session of the Legislature and with the election of legislators and constitutional officers of this state. During this same time your Legislative Committee has attended meetings too numerous to mention with other committees of the California Medical Association, with various departments of the state and with Legislative Interim Committees.

Mr. Ben Read, executive secretary of the Public Health League, and Mr. Gene Salisbury, assistant executive secretary of the Public Health League, have attended all such meetings and in addition have met with the various county societies and have attended meetings called in the various councilor districts for the purpose of explaining legislative problems as they affect medicine.

As you know, regular sessions of the Legislature are held in each odd numbered year and only during regular sessions may general legislative bills be introduced by the assemblymen and senators. In even numbered years, such as this year, the primary problem is a study of the state budget and only with the consent of the Governor may other legislative matters be introduced during the budget session.

One such item introduced and passed during this budget session is AB 6, the so-called diploma mill bill, which will be discussed in more detail later by Mr. Salisbury.

There are numerous budgetary items such as the budget of the Department of Public Health, the Department of Mental Health, the Board of Medical Examiners and others in which medicine has a very vital interest, and such budgetary items are watched with considerable care during the budget session.

It has been our observation that political medicine is becoming extremely complex and the effect of many apparently unrelated actions will in reality bring about important changes in the manner in which we may practice medicine in the future. For example, a judge in a small northern county renders a decision in relation to the staff rules of district hospitals—a decision of vital importance to the doctors of California. On the other side of the picture is the action of chiropractors in Riverside and San Bernardino counties in forming a chiropractors' union affiliated with the AFL-CIO. Why was such a union formed? The president of this chiropractors' union said, "Most of our patients are working people. By joining the AFL-CIO we can help with their union, health and welfare funds."

Medicine is cognizant of ever-increasing pressures from many directions to change the manner in which medicine is now practiced. We are told that no question is being raised as to the scientific portion of the practice of medicine: Most individuals and organizations concerned appear to accept the calibre of medical care as being generally excellent. Yet many of these same groups tell us that the economic distribution of medical care is unsatisfactory and that drastic changes will be required to produce a more efficient method of delivering medical services to the consumer.

Nelson Cruikshank, health insurance consultant for the AFL-CIO, has been quoted as saying: "We believe a union should try for a direct-service health plan, such as the Kaiser plan in California. If it can't get such a plan, the second-best sort of program is service coverage with an income ceiling such as Blue Shield offers. Last choice of all is an indemnity plan."

He further stated: "Our basic quarrel with the individual doctor is that he refuses to recognize he's a layman in economics. He may be even worse than a layman; he may be an illiterate. That's partly because his intensive training in medicine deprives him of the broader education a lot of other people get."

The manner in which medicine will be delivered and paid for in the future will become a matter of legislative concern unless medicine brings forth an acceptable answer to this problem. I need not point out that government at the local, the state and the federal level is interested, as a third party participant, in the economic distribution of medical care. Inasmuch as government represents the people it is obvious that the people have an interest in this problem. If medicine does not develop an equitable and acceptable answer to this economic problem the answer may be provided for medicine through legislation which might, in the end, be quite unpalatable.

The expressed attitudes of many legislators indicate some of the influences which will be brought to bear, in the future, upon your practice and mine. It appears that the further removed an elective official is from his constituents the more he appears, in the eyes of many, to lean toward measures of a socialistic nature. Many legislators appear to have a platform favoring motherhood, opposing sin and proposing the socialization of the practice of medicine. Perhaps the best known such measure is one introduced by Representative Aime J. Forand of Rhode Island (HR 9467). Senator Wayne Morse of Oregon recently jumped on this same bandwagon and, with a flourish of publicity, introduced a companion measure to the Forand Bill in the United States Senate. It is of interest to observe that the federal social planners, although they have not given up their plans to develop a social economy, have apparently become more patient and they appear content to approach their goal from many different directions. There is certainty that government will continue the present concept of paternalism toward the aged, the disabled and the deficient. There will be continuing legislative proposals, many of which will be medical in nature.

Medicine must now decide what attitude it will hold toward these various anticipated legislative proposals. Will we reject all pieces of legislation in the future in which government acts as a third party or will we instead establish a set of principles by which we can judge such future measures, recognizing that some of these proposals can be compatible with established basic principles of medical practice while others so violate those principles that they must merit the full opposition of that collective body known as medicine.

All future governmental medical plans, in which government has a third party interest, will undoubtedly arise in Washington, D. C. These will then be presented to the various states as grants-in-aid; and once this legislation has passed the federal level little can be done at the state level to turn back the tide of social legislation.

It thus becomes the responsibility of each physician, and through him the responsibility of each higher medical echelon to devise a set of principles by which such future legislation may be judged and to further decide whether medicine will or will not oppose any specific legislative proposal when it is measured against this rule of basic medical principles.

Medicine must further recognize that at the Washington level the voice of the doctor has been lost. We are repeatedly told, even by our legislative friends, that the American Medical Association, as a legislative organization, has become ineffective. This lack of ability to bring the problems of medicine to the attention of our senators and congressmen will cost us dearly in the future. A continuation of these same ineffective methods will produce further social medical legislation by the now unopposed do-gooders. Now is the time for decision and that decision must be made by the individual physicians.

The doctors of California have evidenced an increasing interest in legislation and legislative matters during this past year, and that increased interest has been both helpful and appreciated by your Legislative Committee. Without the interest and cooperation of each individual doctor your legislative program cannot hope to be successful. You cannot, by the passage of resolutions or the formation of committees, delegate this responsibility to others. Only through the individual and self-sacrificing efforts of each physician can we hope to continue an effective voice in Sacramento.

The chairmen of the legislative committees of the various county societies have been most helpful in carrying out your wishes. On April 19 and 20 of this year the legislative committees from the northern and southern portions of this state met for a discussion of the various candidates for Assembly, Senate and constitutional officer positions, and evaluation of the various candidates was done based upon the desires of the doctors in the various areas represented. From that meeting your committee received instructions so that we may, at the coming elections, carry out the grass roots intent of supporting your friends and leaving your enemies at home.

I wish to recognize at this time the members of the C.M.A. Legislative Committee, bringing them to your attention so that you may express your appreciation for the many hours of hard work which they have given in your behalf.

Dr. Justin Williams of San Francisco has represented the Bay Area for some long time on your Legislative Committee and has been of marked assistance to your committee and to the doctors of the Bay Area.

The other member of the C.M.A. Legislative Committee, Dr. J. Lafe Ludwig of Los Angeles, has been for many years a tireless worker for medicine. Dr. Ludwig, a member of the Legislative Committee of the California Medical Association is, as well, a member of the Legislative Committee of the American Medical Association.

Mr. Speaker, with your permission, I would like at this time to have Dr. Ludwig address this House of Delegates, speaking to you on national medical legislation.

DR. J. LAFE LUDWIG: Mr. Speaker, members of the House of Delegates of the California Medical Association: The Number One target of the A.M.A. legislation is the defeat of the Forand Bill and similar types of legislation. I use the latter part of that sentence advisedly, because there are some twelve bills introduced along this line, some even worse, such as the Proxmire Bill. A similar bill has been introduced by Congressman James Roosevelt of California.

You know in line with the letter you received from Dr. Palm, including the pamphlet on the Forand Bill, that the Joint Council to Improve the Health and Care of the Aged has been formed. It is represented by four organizations, the American Medical Association, the American Dental Association, the American Hospital Association and the American Association of Nursing Homes. There were practically no statistics available to enable us to come to a conclusion in arriving at a positive approach in opposing this bill.

Now, to the best of our knowledge, social security legislation is going to be heard by the House Ways and Means Committee approximately May 15. That will include the Forand Bill. One member of the House Ways and Means Committee, Congressman King of California, sitting as a member of that committee, should be forwarded any communications that you have relative to that, because it is our sincere feeling that if this bill comes out of committee with the recommendation for passage, and goes to the floor of the House, it will be passed. We have had numerous congressmen say that they have received innumerable letters from members of the medical profession, and that instead of imploring them to vote against the bill should it come to the floor, and stating the reasons they should vote against it, the letters have been nasty letters, as they put it. So I would ask that if you do write your congressman, you give him logical reasons for opposing it rather than derogatory letters.

I would again call your attention to the fact that the A.M.A. *Washington Newsletter* is available for every member of the A.M.A. by writing to Washington, requesting that you be put on the mailing list. I checked with the Washington office about three months ago, and whereas we have some 15,000 members of the A.M.A. in California, there were only 281 interested enough to write for the letter. At last report, there are now over 900 in the last 90 days. As you know, you can keep current with the legislative problems in Washington by looking through your *Journal of the American Medical Association.*

One other thing: In line with this breakdown of communication that your president referred to this morning. Whereas in the past I have had a key man to be in touch with each one of the 30 congressmen in the state, about a month ago at the meeting of the Legislative Committee of the California Medical Association, we decided to stop this duplication of effort and from now on each legislative chairman of each county society unit will be hearing from me. So it will be up to the county legislative chairmen to break down the list as to what congressman or congressmen serve in their particular area.

I am not going to say anything about the Washington office. I heartily concur in everything that has been said. I believe it should even be carried further.

Dr. Dwight Murray, former chairman of the Legislative Committee of the C.M.A., a past president, and now legislative representative of the Council of the C.M.A., will now speak on national medical legislative problems.

Dr. Murray: Mr. Speaker, Dr. MacDonald, Dr. West, members of the California Medical Association: I am certainly glad to be here, always glad to be present at any meeting of the California Medical Association.

A few days ago, the new general manager for the American Medical Association called me and asked me to bring to this group his greetings and best wishes for a successful meeting, and also the greetings of other officers and Board of Trustees of the American Medical Association.

You should know, as Dr. Cass said to you a few minutes ago, that it is of importance to California Medicine to know what is going on in the national scene. I want to say to you this, that the actions taken by this House of Delegates are not only of great importance to the people of California, but of great importance to the people of the United States. In organized medicine, California is looked upon as being one of the leaders; the California delegation is looked upon as the most important and strongest delegation in the House of Delegates of the American Medical Association. They rightfully do that too, because it is one of the largest and most powerful delegations. As you well know, this is the second largest delegation. At present New York has as large a delegation as ours. The number of delegates from New York varies according to the number of members they have, but we are fast overtaking them. It won't be long until we will have not only the most powerful but the greatest number of delegates in the American Medical Association House of Delegates.

I want to emphasize everything that has been said with respect to legislation. From the remarks that Dr. Kilroy made, you can understand how important legislation is, and it is becoming more and more important as time goes on. I remember a good many years ago arising to tell you how important it was in California. If it was important then, it is more important now. We realize that, and have realized it in A.M.A. for some years, that the legislative program in Washington was of the most importance. We also recognize that it was not what it should be. Just a year ago, now, we were considering the Heller Report having to do with the reorganization of the American Medical Association. The reorganization of the Washington office from the legislative point of view was put over until this year. In the past the Washington office has not been as forcible as it should be. Since it came into existence, we have had three different directors. Now, as you know, Dr. Alpin has resigned. He has left the Washington office. His resignation takes effect the first of May. In his place temporarily will be Dr. Kinnard. Dr. Kinnard has been with the American Medical Association office for some three years. He is a very capable man, but it is not expected that Dr. Kinnard will be the permanent director of the Washington office.

You heard from Lafe Ludwig, and you heard from Dr. Cass about the setup of the legislative program of the American Medical Association. The Legislative Committee is made up of men who are chosen from geographical areas. That Legislative Committee meets and goes through all of the bills that are important to medicine and tries to give its ideas not only to the Board of Trustees but to the profession generally, and it is the duty and function of men on this Legislative Committee to see that information is presented to the members of the profession. That is a tremendous job. It is not toward what the Legislative Committee has done so much as what it is trying to do in the future that the reorganization is planned. Dr. Blasingame said this to me on the telephone: "Will you talk to the members of the California Medical Association and see what their ideas are with regard to this reorganization. There will be nothing done officially until after the Congress adjourns."

It would be a mistake to try to change now in the middle of a very intensive legislative program. Therefore, at the meeting of the A.M.A. in San Francisco in June this problem will be very thoroughly discussed. I understand that the California delegation to the A.M.A. has some very constructive suggestions to make about the Washington office. What changes are made will depend entirely, I think, upon the wishes and desires and the suggestions that may be put forth by the various delegations that will be in attendance at the meeting in San Francisco. I want to say to you that whatever is done, it will be done only after the most serious consideration, because we realize the importance of the things that Dr. Kilroy, Dr. Cass and Dr. Ludwig have said to you. It is important to have a very strong legislative organization in Washington, and we realize that if we do not have that, we are probably going to suffer more than we have in the past. By bills being passed that we do not like, we have suffered in the past.

Again, Mr. Speaker, I assure you of my appreciation for being here.

Thank you, Dr. Kilroy, for the opportunity of speaking to you once again. (Applause).

Dr. Kilroy: Mr. Speaker, Mr. Ben Read, executive secretary of the Public Health League, has again done his usual excellent job of representing medicine before the State Legislature and its various committees.

On behalf of the doctors of California, it is my privilege to express our appreciation to Ben for the undivided loyalty which he has given to the physicians of this state for these many years.

Mr. Vice-Speaker, with your permission, I would like to call on Mr. Read to present to this House of Delegates information pertaining to the coming elections in California.

Mr. Ben Read: Mr. Speaker, members of the House of Delegates: As you all know, this is election year and, of course, as good citizens, we are all registered and are going to vote.

The primary election occurs June 3. At that time you will select candidates for United States Senator, 30 members of the House of Representatives, the Governor, the Attorney General and other constitutional officers. You will select twenty state senators and eighty assemblymen.

Some of medicine's good friends are retiring from the State Legislature, and others of your good friends face very tough opposition.

As Dr. Kilroy told you, the legislative chairmen of the county and district medical societies met with the Legislative Committee of the C.M.A. and representatives of the Public Health League, and information was given to them about candidates for the State Legislature, and these local chairmen were asked for their recommendations. This information has been passed along by these local chairmen to the members of your component groups.

Many of these contests will go into the final elections. It is not possible for them to carry it in the primary election as often as they used to, so in the fall we will have to do as in the past: Try to send our friends back and leave our enemies at home. (Applause.)

Dr. Kilroy: Mr. Gene Salisbury, assistant executive secretary of the Public Health League, a member of the team of Read and Salisbury, has again done his usual excellent work in representing the interests of medicine in Sacramento, for which we are all most grateful.

Mr. Speaker, with your permission, I would like to have Mr. Salisbury bring to the attention of this House of Delegates information pertaining to the various interim committees studying medical problems, and also information pertaining to the diploma mill bill.

Mr. Gene Salisbury: Thank you. Mr. Speaker, members of the House of Delegates: Dr. Kilroy has mentioned the diploma bill, Assembly Bill No. 6, that was placed on special call at the March session.

Now, this bill, which had our wholehearted support, is possibly one of the most beneficial bills that our organization has sponsored in a number of years. The bill as signed by the Governor and enacted into law provides for the prosecution (and carrying a felony conviction) of persons selling, bartering or purchasing a fake diploma.

Now, of equal importance are the regulatory provisions carried in the measure, which require the right of inspection under the State Department of Education, an annual inspection, and a reporting by all schools of their faculty, their students and their curriculum. This will be the first time in California's history that the State Department of Education has had the right and the obligation to inspect all schools of learning.

Now, because of our state's phenomenal growth, we find that legislation has become a twelve-month process, rather than a six-month or a one-month process in the even-numbered years. This is carried on by the Interim Committees of both of the houses, the Assembly and the Senate. Indicative of this process is the fact that there are now in operation 84 Interim Committees. There are perhaps 20 out of those that are of immediate and direct importance to our profession. Perhaps the most important is the Senate Committee on the Investigation of Cancer Quackery. That committee under the chairmanship of Senator Jack Thompson of San Jose, has held two meetings. Its next meeting is scheduled for May 6, 7 and 8 in San Francisco. At the San Francisco meeting, we are going to be privileged to hear from Mr. Harry Hoxsey, Mr. Leo Hoffward and Mr. Fred J. Hart. With the assistance of the Cancer Commission, your position will be propounded by Ray Kaiser, M.D., of the National Cancer Institute, Charles Goldberg, M.D., from Dallas, a pathologist, and Harry Garland, M.D., of San Francisco, radiologist. We anticipate an extremely lively and interesting hearing.

We think, from our observations of the committee's progress, that we should be able to anticipate a bill for recommendations that may be most acceptable to medicine. (Applause.)

Dr. Kilroy: Before completing the report of your Legislative Committee, I wish to again commend our legal counsel, Mr. Howard Hassard, and Mr. Bob Huber for the advice and help they have given so many times to your Legislative Committee. This liaison between the legal department and the Legislative Committee is so close that Hap Hassard is regarded as a member of the Legislative Committee without whose help your committee would be most ineffective. These services to medicine are rarely noted by the individual doctor, yet we are all in the debt of Mr. Hassard and Mr. Huber.

The Public Relations Department, through Mr. Ed Clancy, has given invaluable assistance and advice to your committee, and for this we are indebted and grateful.

Mr. Vice-Speaker, members of the House of Delegates, this concludes the report of the Legislative Committee.

REPORT OF COMMITTEE ON PUBLIC RELATIONS

Dr. Sidney J. Shipman

Mr. Speaker, members of the House: I also would like to commend Mr. Clancy and his staff for the excellent work they did on the Public Relations this last year. Our full-time staff is an excellent group.

I would like to call your attention to the printed report of the Public Relations Committee, appearing on pages 78 and 79 of the March issue of California Medicine.

In it the committee has stated that "the success or failure of the public relations effort for the entire profession, how its high ideals of dedication to service of the public are interpreted, can best be measured in the California press; not by an inventory conducted by ourselves!"

That inventory, as noted in the reprinted editorials, has, for the most part, been highly complimentary.

And here again at our Annual Session, the public relations of medicine, how we are meeting our obligations to the people of California, is on display in open convention— our actions to be reported in the press and our decisions the probable subjects for editorial comment.

The best public relations efforts are never spectacular, since they revolve around services the profession has long since determined the public has a right to expect.

During the past year these obligations have been met with increasing understanding and efficiency.

Outstanding, of course, is the continued effort of all county societies and branches to perfect emergency medical care under circumstances as varied as is California's population, geography and climate.

Next in importance is the increase in activity of our Public Service Committees, where misunderstandings between doctors and patients may be reviewed and adjudicated. Physicians everywhere, by their demonstrated integrity, have long since proved that these groups are not doctor-controlled, whitewash mechanisms.

One has only to attend a meeting of a County Public Service Committee to realize the determination of the profession to correct doctor-patient dissatisfaction found to be the fault of physicians. In this, of course, we are not entirely altruistic, because the results show that a misunderstanding that can be corrected within the Public Service Committee room never reaches the jury room of the court house.

In this field of the prevention of professional liability suits, your Public Relations Committee looks forward to cooperation with the Medical Review and Advisory Board.

Another dividend from active Public Service Committees is the furthering of the stability of the operation of voluntary insurance plans—major medical cost coverage being a case in point, where the prevention of abuses by either the patient or the physician is a prime requisite for growth of this comparatively new innovation in the prepayment field.

The many discussions of the operation of the controversial indigent care program have highlighted another of our basic public relations tenets, to-wit: While a variety of resolutions are to be introduced on the subject; while there is disagreement on the operation of the plan, there is no deviation from our determination to care for these and other patients regardless of their inability to pay.

Reviewing these public relations accomplishments, as we have stated, is not spectacular.

What is spectacular is when one of us fails in his responsibility to the patient—to the profession!

That failure can be reflected upon the entire profession with such speed as to jeopardize a proud record of countless successful physician relationships.

That we've had but one minor breakdown during the past year is a credit to all. Particularly is it to the credit of the diligence and determination of county society officers and, in the larger areas, to the day-in and day-out "follow-through" on the part of the executive secretaries.

Your Public Relations Committee has had two successful meetings during the past year, at which we reviewed the operations of the Public Relations Department.

Because of the inter-relationships between Public Relations and Legislation, Dr. Dan O. Kilroy, chairman of the Commission on Public Policy, along with Mr. Ben H. Read and Mr. Gene Salisbury of the Public Health League, has attended these meetings.

Following the directives of this House, the Public Relations Committee has continued to work with students, residents and interns.

On March 30 of this year, in cooperation with the Los Angeles County Medical Association, we held the Fifth Annual Public Relations Conference for the Student A.M.A. members from USC, CME and UCLA.

On April 13 a similar meeting was held in cooperation with the San Francisco County Medical Society for the UC and Stanford students.

This program has been in operation a sufficient time to prove its effectiveness in that many of today's young physicians who are taking active parts in the affairs of their county societies received their first introduction to county and state functions at our early C.M.A.-sponsored Student A.M.A. meetings.

Newsletter, which is distributed each month to all C.M.A. members, members of the Auxiliary, medical students and all delegates from other states to A.M.A., has proved a valuable information medium. The committee received some personal satisfaction when the Medical Society of the State of Pennsylvania started an identical publication.

During the past year California physicians passed the four million mark in the distribution of pieces of public relations material to their patients. These C.M.A.-prepared messages telling of the physician's availability in case of an emergency, his explanation of fees and willingness to discuss them in advance of treatment, and his support of voluntary health insurance plans, together with the very popular Health Records, were submitted in competition to the American Public Relations Association. While the official announcements will not be made until May 2 at the Waldorf-Astoria, we are pleased to state that the California Medical Association will receive an Achievement Award when the judges submit their decisions.

During the year C.M.A.'s First Aid Charts were made available to all physicians. Orders have continued to come in from all areas, indicating physicians have found this is another valuable public relations tool to demonstrate interest in patients. The same goes for the Athletic Injury Charts. This C.M.A.-prepared chart is now on display in nearly every school in the state, and county societies have used it in connection with meetings with health educators and at athletic injury clinics.

Both charts have been widely copied throughout the nation.

This is again an election year. From the public relations standpoint, it is our hope that California physicians, working in close harmony with the Public Health League and County Legislative Committee chairmen will take an active interest in the support of candidates who understand our determination to preserve high standards of medical care.

The minutes of the February 8, 1958, meeting of the Council state:

"The Council shall establish policies relative to public relations and transfer such policies to a strong Committee on Public Relations which shall direct and supervise this activity."

Since the Council receives its directives from the House, we await your decisions. Once they are made, we have every confidence that your Public Relations Committee, acting with the continued fine support of the 40 component county societies, will carry them out to your complete satisfaction. (Applause.)

REPORT OF THE JUDICIAL COMMISSION

Dr. Donald A. Charnock

Mr. Speaker, members of the House: The Judicial Commission with the aid of legal counsel is engaged in preparing a detailed statement on disciplinary procedures. This will be sent to each county society and will outline the steps to be followed in preparing disciplinary charges. The statement will outline the rights and privileges of members in preparing their defenses in disciplinary proceedings.

REPORT OF COMMITTEE ON REORGANIZATION

Dr. Frederic Ewens

Mr. Speaker, members of the House: The resolution on Constitutional Amendment [No. 2] has been withdrawn. As to Resolution No. 24 that was presented to the House in 1957: The committee has considered the matter referred to it by the House of Delegates, and it is of the opinion that further time and study are required to arrive at a final conclusion.

It is therefore recommended that the committee be continued with the expectation that a formal report of its deliberations will be made at the next Annual Session of the House of Delegates.

RESOLUTIONS ADOPTED

Shown below are the resolutions adopted by the House of Delegates or referred to the Council or to committees of the Association. Where pertinent, the comments of the appropriate reference committee of the House of Delegates are appended.

PUBLIC ASSISTANCE MEDICAL CARE PROGRAM

Resolution No. 1.*

Whereas, The federal formula of permissive legislation to states on a dollar matching basis has created an apparently irresistible attraction to the majority of the states; and

Whereas, Resultant State Legislation (i.e. AB 679) appears to be founded more on the automatic appropriation of available funds than on such fundamental issues as the demonstrated need for such legislation; and

Whereas, There had indeed been no factual local demonstration of need for this program before the State Legislature; and

Whereas, Federal and state programs necessarily entail federal and state control in order to insure protection of the tax dollar with resultant loss of traditional local autonomy and responsibility to solve local problems, and

Whereas, AB 679 provides for and results in unreasonable and unnecessary dictatorial control of both patient and physician; and

Whereas, Any welfare medical program administered by national, state and county agencies with resultant multiplicity of controls results in heavy costs in the administration, and an increased tax burden; and

Whereas, The practice of medicine under AB 679 fails to maintain high ethical regard for all phases of medical care, violates privacy of patient and physician relationship, essentially abolishes patients self-respect and personal dignity, nullifies any effort to maintain family responsibility for care and fails to stimulate any honest effort on the part of the patient to carry as much as possible of his financial responsibility, and

Whereas, Economic problems concerning the provision of medical care for indigents and the elderly do exist which require the leadership and imagination of doctors both from humanitarian motivations and from the desire to maintain the private practice of medicine, and

Whereas, From time immemorial, physicians have cared for the indigent without thought of compensation and will always do so without government control or administration; therefore, be it

Resolved, That this House of Delegates go on record as rejecting the principles incorporated in AB 679 and that cooperation past and future in the care of the patient under this program in no way implies endorsement of O.A.S. and O.A.S.I.; and be it further

Resolved, That the House of Delegates of the California Medical Association instruct the Council to join with other interested groups in exerting maximal effort and full resources, and any other facilities to repeal Assembly Bill 679 and applicable Federal legislation; and be it further

Resolved, That recognizing that AB 679 is now law and recognizing the paramount obligation to protect the welfare of our patients, The House of Delegates urges that immediate steps be taken to improve the program and to eliminate existing defects in AB 679 and its administration, as follows:

1. Medical care programs be controlled and administered by the individual counties, with licensed physicians exercising through their organizations the degree of control over the appropriate agency commensurate with physician's responsibilities to the patient.

2. To expedite return of control to the county level, medical societies should cooperate fully with their local Welfare Board in administration of the program, in determining the needs of such a program and appraising the effectiveness of the screening of recipients and controlling any abuses of the program, and if possible, securing physician membership on the local Welfare Board.

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*The resolution adopted was prepared by Reference Committee 3A as a substitute for twenty resolutions introduced on the same subject. These were originally numbered 1, 4, 10, 12, 13, 17, 21, 22, 24, 35, 36, 37, 38, 39, 55, 57, 65, 66, 69 and 72. The substitute resolution is shown here as No. 1 since that was the first of the series.

3. To accelerate return of control to the county level, various pilot programs such as the feasibility of the physician charging patients his usual fee without restriction, and other appropriate studies, at a local level, should be instituted without delay.

4. Removal of the prior authorization system to take place as soon as the present pilot program has developed information deemed adequate by the California Medical Association liaison committee.

5. That a uniform method of payment should be adopted, the most acceptable method of payment to be determined by a poll of California Medical Association membership.

6. That the officers, Council and Legislative Committee of the California Medical Association be instructed to urge the Governor to appoint one or more physicians to the State Board of Social Welfare.

ACTION: Adopted by House.

* * *

C.P.S. MEDICAL PERSONNEL

Resolution No. 2.
Author: Robert C. Combs.
Representing: San Francisco Medical Society.

Whereas, California Physicians' Service has in the past few years attempted to regulate the length of hospitalization of its subscribers; and

Whereas, The investigation of suspect cases has largely been conducted by *lay* personnel of California Physicians' Service; and

Whereas, Such personnel is not adequately trained to interpret medical reports and hospital records; and

Whereas, Decisions reached in this manner constitute an infringement on the practice of medicine, especially when the attending physician's judgment is questioned; and

Whereas, The physician is usually held responsible by the patient when all or a portion of the hospital bill is not paid by California Physicians' Service; and

Whereas, Other insurance companies in this field have rarely undertaken such police action in arbitrarily curtailing benefits anticipated by the patient and physician; and

Whereas, This type of solution to the problem of alleged unnecessary hospitalization has resulted in poor relationship between the patient and his physician, as well as between the physician and California Physicians' Service; and

Whereas, Most of these questionable cases could be easily resolved or clarified by a telephone conversation between the medical director of California Physicians' Service and the attending physician; now, therefore, be it

Resolved, That the California Medical Association House of Delegates request an immediate review of this practice by the California Physicians' Service Board of Trustees and suggest adequate medical personnel and more direct communication between its medical personnel and the particular attending physician.

ACTION: Adopted by House.

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SAFETY BELTS

Resolution No. 3.
Author: Robert C. Combs.
Representing: San Francisco Medical Society.

Whereas, It is now known that the use of safety belts in automobiles effects a substantial reduction of death and injuries in crashes; and

Whereas, The number of persons currently killed or injured annually in automobile crashes is large enough to constitute a public health problem; now, therefore, be it

Resolved, That the House of Delegates of the C.M.A. urge the state legislature to make mandatory the installation and use of such belts in all new vehicles registered in California.

ACTION: Adopted by House.

(Comment by Reference Committee No. 3B: "The committee was made aware of the fact that the major automobile manufacturers are underwriting the costs of an investigation being performed by Cornell University into the problem of motor vehicle safety. The committee recognizes the broad aspects of this continuing problem which includes other safety devices such as recessed and padded dashboards, recessed steering columns and more secure door latches. The committee feels this is an excellent preliminary step in the direction toward highway safety . . .")

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C.P.S. FEE SCHEDULE

Resolution No. 5.
Author: J. G. Middleton and J. Barry Smith.
Representing: San Luis Obispo County Medical Society.

Whereas, The C.P.S. fee schedule is recognized as a fee schedule acceptable to the members of the C.M.A. when in reality it is a substandard fee schedule; now, therefore, be it

Resolved, That this fee schedule be brought up to a realistic fee schedule.

ACTION: Adopted by House.

INDUSTRIAL ACCIDENT CASES

Resolution No. 6.
Author: J. G. Middleton and J. Barry Smith.
Representing: San Luis Obispo County Medical Society.

WHEREAS, Industrial accident cases represent people in a financially sound part of our economy and fees paid for such cases are substandard; now, therefore, be it

Resolved, That every effort be made to bring the fees up to a realistic level.

ACTION: Adopted by House.

* * *

PROTECTION OF THIRD PARTY INTERESTS

Resolution No. 9.
Author: Winston C. Hall.
Representing: San Diego County Medical Society.

WHEREAS, The continued interjection of a third party in the doctor-patient relationship is inevitable as long as prepaid health plans and government promoted programs continue to expand; and

WHEREAS, The third party must receive an assurance that a properly itemized bill will be furnished the patient and that any alleged abuses or questionable practices will not go unnoticed; now, therefore, be it

Resolved, That this House of Delegates of the California Medical Association instruct the Council of the California Medical Association to urge all county societies to offer where existent the use of review committees to all third party insurance carriers and government agencies so any unresolved disputes over medical services or fees may be heard: the purpose being to furnish authoritative information to enable third parties to take such action as is necessary to protect their rightful interest.

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FEE SCHEDULES

Resolutions Nos. 14, 20, 26, 43 and 54.*
Author: C. E. Horn.
Representing: Sacramento County.

(Comment by Reference Committee No. 3: "Resolution No. 14 has to do with fee schedules; Resolution No. 20 has to do with a code of medical economics; the subject of No. 26 asks for a description of medical services and a dollar schedule of fees; No. 43 involves the principles of medical socio-economics and finally, No. 54, the Council resolution, involves the development of medical fees.

"It is the committee's opinion that all of these resolutions are concerned primarily with the development of principles of medical economics and have a common interest. It seems logical to this committee that all of these topics of necessity must be considered together. We therefore offer to you a substitute resolution.

"There has been an increasing clamor from the membership and the Council for a statement of policy, and in this substitute resolution we offer for the consideration of the House a solution to this complex problem.

"Within the context of this substitute resolution you will be referred to Resolutions No. 3 and No. 4 passed by this House of Delegates in 1954. I would like to read to you this action which was adopted.

"Resolution No. 3

***"RESOLVED,* That the California Medical Association proceed with vigor in the study, development and implementation of the Usual Fee Indemnity Plan.**

"Resolution No. 4

***"Whereas,* Many people are anxious to know in advance what their attending doctors' fees will be in order that they may secure adequate insurance or other means to pay those fees without worry about the financial problem at the time they need medical care; and**

***"Whereas,* Nearly all doctors already have fees which are their customary charges for the particular service involved; now, therefore, be it**

***"RESOLVED,* That the California Medical Association urge each of its members (a) to set up a list of his own fees, (b) to make this list known to his own patients, and (c) to assure his patients that he will make no higher charges except by agreement with the patient concerned before service is given.**

"It has come to the attention of the committee that many of the newer members of the House of Delegates may not be acquainted with the background of the Usual Fee Indemnity Plan. If it is the desire of the House, and you will so indicate, I shall be happy to ask the Speaker of the House for the privilege of the floor for a representative of Alameda-Contra Costa Medical Association. He will present a brief explanation of the Usual Fee Indemnity Plan which has been used successfully for the last five years in Alameda-Contra Costa County. This plan prompted the adoption of resolutions No. 3 and No. 4 of the 1954 House of Delegates.

"Mr. Speaker, I now present the committee's substitute resolution entitled 'Development of Principles of Medical Economics'.")

WHEREAS, The ever increasing interposition of third parties between physicians and patients threatens the existence of the private practice of medicine; and

WHEREAS, In the private practice of medicine it is the responsibility of the patient to pay the physician's fee; and

WHEREAS, Schemes of nationalization hinder the development of voluntary prepaid health insurance; and

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*Doctor Horn is shown as the author of the first resolution of this series on the same subject. As shown above, Reference Committee No. 3 combined these into one substitute resolution which was adopted by the House of Delegates.

WHEREAS, Medicine has heretofore participated in the development of prepayment health insurance; and

WHEREAS, There is a need for the C.M.A. to reestablish its position in relationship to the economic aspects of private medical practice; and

WHEREAS, The C.M.A. Council urgently desires further and definitive guidance from the C.M.A. membership; now, therefore, be it

Resolved: 1. That it be reaffirmed that each physician is privileged to charge a fair fee for his services.

2. That each physician is to be guided by fees charged within his county or economic area.

3. That it is the responsibility of the local county medical societies to review when indicated the fees charged by their members.

4. That C.P.S. is the agency of the C.M.A. through which fixed service contracts are established.

5. That the House of Delegates reaffirm its support of the Usual Fee concept incorporating the principle of prior agreement as outlined in Resolutions No. 3 and No. 4 adopted in 1954 by this House of Delegates.

6. That another survey be made in 1958 of the fees charged by C.M.A. members and that annual rechecking surveys be made thereafter.

7. That in any discussion of doctors' fees it is recommended the current Relative Value Studies be used as a base with a factor determined by an annual statistical survey.

8. That any consideration of fee schedules incorporate free choice of physicians and fee for service.

ACTION: Adopted by House.

* * *

ADVERTISING

Resolution No. 16.
Author: Dave Dozier.
Representing: Eleventh Councilor District.

Resolved, The House of Delegates of the C.M.A. commends the Committee on Advertising of CALIFORNIA MEDICINE for its excellent work. It feels certain that this good work will continue; and be it further

Resolved, That this House of Delegates instruct the Delegates of the C.M.A. to the A.M.A. to introduce resolutions in the American Medical Association House of Delegates calling the attention of other journals sponsored by medical associations to the rules for advertisers published by the advertising committee of CALIFORNIA MEDICINE in the hope that the general level of professional pharmaceutical advertising in current literature may benefit thereby.

ACTION: Adopted by House.

(Comment of Reference Committee No. 3B: "Committee 3B is entirely in accord with the intent of this resolution. A printed set of rules for the guidance of advertisers was submitted to the committee, which found that the present rules for advertising in *California Medicine* are very commendable. The advertising committee for *California Medicine* is composed of a representative of the Food and Drug Administration together with practicing physicians of unquestioned repute. . . . It was realized that rules are only as good as the men who apply them. Your reference committee is confident that the present advertising committee has been doing a superb job. Members are invited to compare advertising in *California Medicine* with that in other journals in the United States. The committee therefore recommends the substitute resolution . . ." shown above.)

* * *

C.M.A. DEPARTMENT OF NEGOTIATIONS

Resolutions Nos. 25, 30 and 64.*
Author: Albert E. Long.
Representing: San Francisco Medical Society.

WHEREAS, The American people have expressed a desire for protection against the cost of illness in all age brackets; and

WHEREAS, We in medicine wish to preserve the traditional relation between physician and patient and to minimize the interposition of three parties; and

WHEREAS, In 1957 the House of Delegates passed the following resolution: "That the Council of the C.M.A. develop a department with adequate staff whose duty it shall be to represent the organized medical profession in negotiations with representatives of any and all groups which are designed to provide or control the furnishing of medical care to private citizens in this state"; and

WHEREAS, The C.M.A. Council has had this under study and has not been able to formulate guides for the most effective manner of negotiations with third parties; now, therefore, be it

Resolved, That the C.M.A. Council be directed to expedite the creation of a department to operate within the C.M.A. structure. Inasmuch as this department's scope of activity is purely economic it is recommended that it be kept separate from the administrative structure of C.M.A.; and be it further

Resolved, That the immediate problem of this department shall be a study of the feasibility and propriety of developing a separate foundation to represent physicians in the fields of socio-economic research, study and negotiations; and be it further

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*Resolutions No. 30 and No. 64, also introduced from San Francisco, were combined with No. 25 in the substitute resolution shown here.

Resolved, That whenever state or federal law requires development of methods and fees for the care of individuals by private physicians, it shall be the duty of the Council of the C.M.A. or its authorized representatives to review and advise in the development of such contracts for physicians who choose to participate or whose patients must participate and award or withhold Council approval.

ACTION: Adopted by House.

* * *

C.P.S. SEPARATE PREMIUMS

Resolution No. 27.
Author: Robert C. Combs.
Representing: San Francisco Medical Society.

WHEREAS, In the formulation of contracts under C.P.S., it has been difficult for the patient to distinguish that portion of the premium which represents the services of physicians from all other services; now, therefore, be it

Resolved, That in all contracts under C.P.S. management, each C.P.S. member will receive communications enlightening him as to what premium represents solely and exclusively the cost of services rendered by the attending physician.

ACTION: Adopted by House.

* * *

BASIC MEDICAL RIGHTS OF AMERICAN CITIZENS

Resolution No. 28.
Author: Albert E. Long.
Representing: San Francisco Medical Society.

WHEREAS, In the social trend toward organized programs for the purpose of obtaining protection against the unexpected costs of illness, various governmental agencies now act as third parties for the purpose of organizing and managing such programs, thus interposing themselves between physicians and patients; and

WHEREAS, Certain of these plans have resulted in the surrender to bureaucratic control of the freedom of action of the individual; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association approve the following principles:

We, as physicians of California, cognizant that the American citizen enjoys certain basic rights as his heritage, and that these rights extend to the citizen in his position as a patient, do hereby specify these basic medical rights:

1. He shall have the right to retain the physician of his choice, at office, home or hospital, and shall be free to terminate the professional relationship at his pleasure.

2. He shall have the right to the special skills and techniques of medicine, and to the advantages of consultation. His physicians shall have qualifications which have been determined by their peers, not by legislation; no governmental action shall create, to his detriment, first, second and third class physicians with first, second, and third class abilities, training, duties, or remuneration.

3. He shall have the right to know that his physician is responsible for all decisions regarding the extent of his medical care, and that these decisions are not dictated, restricted, or suborned by any third party. Nor shall legislative action or executive edict force his physician to regard him as a chattel, a number, or a head. It shall be recognized that any person covered by such programs is not medically indigent.

4. He shall have the right to know that the management of his medical program is efficient and open to inspection.

This House of Delegates instructs the Council and its representatives to maintain these principles as the basis for participation in any program of medical care, and instructs the delegates of the California Medical Association to the A.M.A. to press for immediate affirmation of this resolution.

ACTION: Adopted by House.

* * *

RELATIVE VALUE STUDY IN C.P.S.—SCHEDULES A & B

Resolution No. 29.
Author: Don C. Musser.
Representing: San Francisco Medical Society.

WHEREAS, In the report of the Commission on Medical Services a meeting was held with the executive committee of the Commission and the Executive Committee of the Board of Trustees regarding the possibility of bringing the C.P.S. Schedules A and B up to a level which more closely approximates current fees throughout the state; and

WHEREAS, It was agreed that, consistent with good business practices, the C.P.S. Board of Trustees will develop ways and means of increasing income levels so that the relative value study on a $4.00 unit basis can be eventually (even though gradually) implemented on the present Schedule A; and

WHEREAS, It was also agreed that consistent with good business practices, the C.P.S. Board of Trustees will develop ways and means of increasing income levels so that the relative value study on a $5.00 unit basis can be eventually implemented on the present Schedule B; now, therefore, be it

Resolved, That the C.P.S. be instructed to adopt and implement the Relative Value Study in Schedules A and B.

ACTION: Adopted by House.

(Comment by C.P.S. Reference Committee: "The committee feels that since a changeover of C.P.S. fees to comply with the Relative Value Study as mentioned in the body of this resolution as being a gradual process and because this changeover now is already being studied by the Council and the C.P.S. Board of Trustees, and realizing it may consume some time, the committee does not feel that C.P.S. should be restricted by placing a definite time limit . . .")

* * *

CONFIDENTIAL STATUS

Resolution No. 31.
Author: Charles P. Lebo.
Representing: San Francisco Medical Society.

Whereas, The evolution of medical practice in recent years has complicated the classic concept of the physician-patient relationship by the addition of and interposition of certain third parties such as insurance carriers, governmental agencies, and legal practitioners and institutions; and

Whereas, Considerable confusion exists in the minds of physicians (and lawyers) concerning the ethical and legal aspects of the privileged communication as applied to physicians; now, therefore, be it

Resolved, That the Commission on Professional Welfare of the California Medical Association be directed to undertake a complete study of all phases of the confidential nature of the physician-patient relationship and render a report of their findings and recommendations to the House of Delegates of the California Medical Association at its 1959 annual meeting.

ACTION: Adopted by House.

* * *

HEALTH INSURANCE

Resolution No. 32.
Author: John F. Murray.
Representing: Fresno County Medical Society.

Whereas, Health insurance is of general interest to the public; and

Whereas, State educational facilities, especially colleges and universities, present curricula dealing with health insurance; and

Whereas, Faculty members have been known to emphasize or recommend certain aspects and types of medical insurance rather than presenting all conflicting viewpoints on the subject; and

Whereas, Many doctors of medicine in the California Medical Association and component county societies have had extensive experience in health insurance which qualifies them as competent consultants; and

Whereas, Such tax-supported educational programs should democratically present all views; now, therefore, be it

Resolved, That the House of Delegates instruct the Council to present to the governing bodies of tax-supported institutions of learning, means of having the medical profession act as qualified consultants in curricula and extra-curricular programs in order to provide democratic views on such educational programs.

ACTION: Adopted by House.

* * *

REIMBURSING PRESIDENT, PRESIDENT-ELECT

Resolution No. 34.
Author: Donald M. Campbell.
Representing: San Francisco Medical Society.

Whereas, Many deserving, desirable and younger candidates are unable to accept the nomination of President-Elect or President of the C.M.A. because of limited means; now, therefore, be it

Resolved, That the Council be authorized to allot to the President-Elect and President during their year of office a sum of not more than ten thousand dollars or one hundred dollars a day in excess of ordinary expenses while on C.M.A. business.

ACTION: Adopted by House.

(Comment by Reference Committee No. 3B: "Discussions before the Reference Committee indicated that there was divided opinion upon this subject. Apparently the question does not lend itself to resolution other than by a vote of the House. The committee gained the impression that the resolution was well received by the Delegates and the committee itself is in favor of the resolution.")

* * *

TAX EXEMPTION FOR MEDICAL EXPENSE

Resolution No. 40.
Author: Lewis T. Bullock.
Representing: Los Angeles County Medical Association.

Whereas, The Federal Government allows an exemption on the income tax for medical expenses up to $10,000.00; and

WHEREAS, The State of California restricts exemptions on income tax for medical expenses to $2,500.00; and

WHEREAS, The person with very high medical expenses is the one who most needs complete exemption for his medical expenses on his income tax; now, therefore, be it

Resolved, That the Officers, Council and Legislative Committee of the California Medical Association be instructed to take all necessary action to induce the State of California to make exemptions from income tax for medical expenses in California the same as accepted by the Federal Government.

ACTION: Adopted by House.

* * *

WASHINGTON OFFICE OF A.M.A.

Resolutions Nos. 41 and 70.*
Author: Edward H. Crane.
Representing: Los Angeles County Medical Association.

Resolved, That the A.M.A. be asked to make an immediate reevaluation of the functions of the Washington office of the A.M.A. and to institute such changes and other modifications or new approaches as may be necessary to provide medicine with effective public and government relations.

ACTION: Adopted by House.

* * *

NATIONAL LIBRARY OF MEDICINE

Resolution No. 44.
Author: William F. Quinn.
Representing: Los Angeles County Medical Association.

WHEREAS, Funds will doubtless be provided by the Congress of the United States for construction of an appropriate building to house the National Library of Medicine; and

WHEREAS, Recent weather damage has made emergency repairs on the existing structure imperative; therefore, be it

Resolved, That the rich heritage of the National Library of Medicine be protected and maintained by giving this project the highest priority; and be it further

Resolved, That copies of this resolution be forwarded to the appropriate senatorial and congressional representatives from California.

ACTION: Adopted by House.

EMERGENCY FACILITIES AND THE PHYSICIAN

Resolution No. 45.
Author: Fordyce Johnson.
Representing: Los Angeles County Medical Association.

Resolved, That the Council of the California Medical Association continue to sponsor a widespread educational program among physicians and the public emphasizing the role of the personal physician in emergency as well as routine and preventive care and urging selection of such a physician before the need arises.

ACTION: Adopted by House.

(Comment by Reference Committee 3B: "For many years there has been an educational campaign among physicians and the public recommending the selection of a personal physician. This resolution amplifies the subject by placing emphasis on the desirability of such a relationship before the existence of an emergency.")

* * *

PATIENT RESPONSIBILITY IN MEDICAL CARE PLANS

Resolution No. 46.
Author: Paul Hoagland.
Representing: Los Angeles County Medical Association.

WHEREAS, Socio-economic changes in our society have resulted in increasing third party participation in the distribution and control of Medical Care; and

WHEREAS, Such third party participation may improve the distribution of Medical Care through the principles of pre-payment and insurance; and

WHEREAS, The serious danger in such third party participation is the threat of lowered standards of quality (due to interference with the feelings of personal responsibility of the physician for his patient, and the patient for sound and economical use of medical services) ; and

WHEREAS, Personal responsibility of both the physician and the patient are encouraged if the patient has a continuing financial interest in his medical care (through the use of deductibles, co-insurance, and policy restrictions controlling injudicious demand for medical services) ; now, therefore, be it

Resolved, That the California Medical Association adopt the policy that no future proposal for third party participation in the distribution of Medical Care (whether by government plans, medical service plans, insurance companies or other agencies) will receive unqualified endorsement unless such proposal contains adequate provisions for continuing patient financial participation in his medical services, as by the use of deductibles, co-insurance, and other reasonable restrictions.

ACTION: Adopted by House.

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*Reference Committee combined these two resolutions into the substitute resolution shown above, which was adopted by the House of Delegates.

(Comment by Reference Committee 3B: "A number of health insurance policies embracing this principle have already been written, covering a great number of beneficiaries in industry. The principle of deductible insurance has been thoroughly understood and accepted in the automobile insurance field.")

* * *

TAX DEDUCTION FOR TUITION COSTS OF HIGHER EDUCATION

Resolution No. 47.
Author: William F. Quinn.
Representing: Los Angeles County Medical Association.

WHEREAS, Ever increasing federal and state taxes are becoming more burdensome to the average citizen; and

WHEREAS, The United States Government recognizes the need, necessity and requirement of higher education and training in the scientific and professional fields; and

WHEREAS, The tuition costs and fees of students maintained in state supported universities are less than tuition costs and fees of students in private supported universities due to subsidy by tax funds; and

WHEREAS, The tuition costs and fees of students maintained in private institutions of higher education are entitled to benefits and considerations equal to those of a student maintained in a subsidized state university; and

WHEREAS, The tuition expense and fees incurred by a student attending a private institution of higher education should be deductible to the taxpayer to offset and equalize the subsidy granted the student of a state supported university; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association urge the legislative committee of the American Medical Association and Members of Congress, from the State of California, and members of the State Legislature of the State of California, to take such steps to initiate or to have introduced into the Congress of the United States and the Legislature of the State of California, legislation which would have as its object as allowing all items incurred in the maintenance of a student in a recognized college or university for tuition or fees as a deductible item in the computation of gross income for federal and state income tax purposes.

ACTION: Adopted by House.

(Comment by Reference Committee No. 3B: "Reference Committee 3B considers that there is much merit to this suggestion . . .")

NURSE TRAINING PROGRAM

Resolutions Nos. 49, 50 and 51.*
Author: Robert Dennis.
Representing: Santa Clara County.

WHEREAS, It is fundamental that the medical profession and the public are deeply concerned with good, sound nursing care for the sick and injured, and thus believe in modern training programs for nurses assuring such care; and

WHEREAS, Many leaders in the field of nursing education have altered the nursing program of training so that future graduates of nursing will be poorly equipped for the care of their patients because of overemphasis on academic training and because of limited necessary practical experience; and

WHEREAS, It is believed that the medical profession at county, state, and national levels, could be of great assistance to the nursing profession, in planning programs of training which would be consistent with nurses' needs and dignity, while at the same time assuring physicians and the public of experienced and well-balanced nursing care; and

WHEREAS, Recent training programs have not utilized the recommendations of the medical profession; now, therefore, be it

Resolved, That the C.M.A. Council initiate continuing discussions with representatives of the California Nurses Association, California League of Nursing, the California Board of Nurse Examiners, the California Hospital Association, and all other interested groups, to resolve the inadequacies in quality and quantity of nurse training. The results of such discussions shall be disseminated to the medical profession through reports to the county medical societies and editorialized in CALIFORNIA MEDICINE; and, be it further

Resolved, That the Delegates to the A.M.A. be instructed to request similar conferences on the national level.

ACTION: Adopted by House.

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*Reference Committee 3B combined these three resolutions into a substitute resolution shown above. The committee commented that it was "appalled to learn that the advice of highly competent and esteemed physicians on advisory committees and the California State Board of Nursing had been ignored to such an extent that it frequently became difficult to enlist the services of competent physicians to serve in these capacities, which had now become such chores."

EMERGENCY AUTOMOBILE INSIGNIA

Resolution No. 52.
Author: Leon P. Fox.
Representing: Santa Clara County Delegation.

WHEREAS, The Medical Profession of California is finding it more difficult to reach patients who are in need of emergency care, because of an increasing traffic problem; and

WHEREAS, The safety of the physician during emergency travel is lacking under present conditions; and

WHEREAS, The traffic patrolmen, who are already very cooperative, should be able to identify the emergency physician immediately and should through enabling laws be permitted to allow him to pass conventional blocks and obstructions undetained; now, therefore, be it

Resolved, That the Council of the C.M.A. be directed to take necessary action to amend the California Motor Vehicle Code authorizing doctors of medicine to have special, standard, properly lighted, emergency signal markers on their automobiles, and that all police be directed to recognize them.

ACTION: Adopted by House.

(Comment by Reference Committee No. 3B: "With the increased density of population and traffic congestion the problem outlined in this resolution becomes more and more onerous. Resistance has been encountered, however, when similar insignia have been desired in the past. This resolution calling for amendments to the California Motor Vehicle Code approaches the problem logically because uniform statewide adoption of the insignia must necessarily be by a legislative process which will declare physicians' cars as emergency vehicles and accurately delineate privileges conferred and penalties inflicted for their violation and abuse.")

* * *

FACULTY PRIVATE PRACTICE

Resolution No. 53.
Author: Clyde L. Boice and Burt L. Davis.
Representing: Santa Clara County Delegation.

WHEREAS, The Council of the C.M.A. appointed a Special Committee on the Private Practice of Medicine by Medical School Faculty Members in 1956; and

WHEREAS, The resolution recommending establishment of this committee requested yearly reports; and

WHEREAS, The 1957 report of this Special Committee was enthusiastically received by this House of Delegates; and

WHEREAS, The C.M.A., as an organization and through its individual member's efforts, has evidenced its interest in the welfare of California's Medical Schools; and

WHEREAS, We have not been informed of the attitudes of the various medical schools toward the recommendations contained in the Special Committee report; and

WHEREAS, As an organization and as individuals, we are interested in the attitudes of the medical schools; now, therefore, be it

Resolved, That the Special Committee on the Private Practice of Medicine by Medical School Faculty Members be instructed: (1) To meet with representatives of the medical schools and determine their attitudes toward this committee's report of 1957, and (2) annually to report its continuing findings to the House of Delegates.

ACTION: Adopted by House.

(Comment by Reference Committee 3B: "It has been quite apparent that a serious problem exists in the private practice of medicine by faculty members of medical schools or other physicians whose facilities are provided for them by tax-supported or by private institutions. The Council on Medical Services of the American Medical Association made a thorough study of the conditions and practices as they existed nationwide. The House of Delegates of the C.M.A. resolved in 1956 that such a study should be made by the California Medical Association. A special committee was appointed, chairmanned by Dr. Dwight Wilbur. The excellent report of this special committee was accepted by this House of Delegates in May of last year and became a basis of policy of the California Medical Association. Its urgency was emphasized by the fact that it was reproduced shortly thereafter in the July, 1957 issue of *California Medicine.* The response of medical administrators to the principles outlined in this report is of great interest to many physicians. Section III of the report states: 'The resolution referred to the Council by the Delegates last year (1956) requested that yearly reports be rendered by this committee. This, then, is our first report.'

"No second report has been forthcoming. The Reference Committee has been informed that this committee has held no further meetings. The adoption of this resolution, therefore, appears most timely.")

* * *

SOCIALISM

Resolution No. 58.
Author: Frederic P. Shidler.
Representing: San Mateo County Medical Society.

Be It Resolved, That the California Medical Association recognize government financed and administered medical plans as no different from governmental monopolistic operation of any industry; and be it further

Resolved, That the officers of the California Medical Association decline to bind its individual or collective members to any agreement with a bargaining third party, and be it further

Resolved, That the California Medical Association assert its belief in democracy, warn its membership of the deeply entrenched position of power with which all forms of government surround its electorate, and declare its support of intellectual and economic freedom for all men, including physicians.

ACTION: Adopted by House.

* * *

CANCER QUACKERY LEGISLATION

Resolution No. 59.
Author: John W. Cline.
Representing: Cancer Commission.

Whereas, Legislation designed to combat cancer quackery and at the same time provide security for the freedom of research and the legitimate practice of medicine was introduced into the last session of the Legislature and received widespread support; and

Whereas, This matter was referred to a Senate Interim Committee for further study; and

Whereas, This Committee has held hearings, issued a progress report and will hold further hearings; now, therefore, be it

Resolved, That the California Medical Association express its appreciation and commendation to the Interim Committee for the fair, conscientious and thorough investigation in its undertaking; and be it further

Resolved, That the House of Delegates reiterate the opinion of the California Medical Association that legislation to curb cancer quackery is urgently needed; and be it further

Resolved, That the California Medical Association respectfully suggest to the Interim Committee that it give consideration to the following principles in the formulation of legislation.

1. A Cancer Council appointed by the Governor, composed in the main of physicians and surgeons and including members of the faculties of the schools and colleges in California granting degrees leading to licensure as physicians and surgeons in this state, be created within the Department of Public Health.

2. The Cancer Council should have the following responsibilities:

(a) To investigate and evaluate any drug, material, device or method used in or purported to be used in the diagnosis or treatment of cancer.

(b) To require that the Council be provided with samples of any drug, material or device in amount ample for investigation and all information pertinent thereto. Refusal to comply with a request of the Council to do so shall constitute a punishable infraction of law and in applicable instances shall constitute unprofessional conduct within the meaning of the Business and Professions Code.

(c) To hold hearings and to subpoena persons and documents for the purpose of its investigations.

(d) To make a finding of scientific fact as to the value or lack thereof concerning any method, drug, material or device used in the diagnosis or treatment of cancer.

(e) If after full and impartial hearing, any drug, material, or device be found to be harmful, lacking in value, fraudulent or deceitful to issue an order to cease and desist the use of such means or substantially similar means in the diagnosis or treatment of cancer which shall be binding upon the individual, group, body, association or organization using said means of diagnosis or treatment.

(f) To apply to the Superior Court of any county for the issuance of appropriate order restraining the use of said means of diagnosis or treatment of cancer.

ACTION: Adopted by House.

* * *

C.P.S. SPONSORSHIP OF *DOCTORS' NEWS CONFERENCE*

Resolution No. 61.
Author: John Schaupp.
Representing: San Francisco Medical Society.

Whereas, Members of the California Medical Association are desirous of giving the public an opportunity to see and hear accurate information concerning their health; and

Whereas, The TV program Doctors' News Conference, presented in the Bay Area through the cooperation of the San Francisco, San Mateo, Santa Clara, Marin and Alameda-Contra Costa Medical Societies, does disseminate beneficial and sound medical information; and

Whereas, California Physicians' Service will sponsor this program on Tuesday evenings at 8:00 p.m. for the next six months; and

Whereas, We have not been hesitant to criticize some actions of California Physicians' Service; now, therefore, be it

Resolved, That the California Medical Association go on record as commending California Physicians' Service for their cooperation with the physicians of California and their forward-looking attitude in sponsoring this public service program.

ACTION: Adopted by House.

FEES FOR PREPARATION OF INSURANCE FORMS

Resolution No. 62.
Author: James Thompson.
Representing: San Francisco Medical Society.

WHEREAS, The successful operation of both private and governmental health insurance plans requires the use of certain forms filled out and submitted to the respective carriers by physicians, and

WHEREAS, The preparation of these forms constitutes a medical service which occupies a significantly large and ever-increasing portion of the time of the physician and his office staff; and

WHEREAS, It is no longer economically possible to offer this medical service gratuitously; now, therefore, be it

Resolved, That the Commission on Medical Services of the California Medical Association be directed to include a section on fees for preparation of insurance forms in the Relative Value Fee Study and take whatever steps may be necessary to include fees for form preparation in the fee schedules of all insurance plans approved by the California Medical Association.

ACTION: Adopted by House.

* * *

NURSING PRACTICE ACT

Resolution No. 67.
Author: Edward Liston.
Representing: Santa Clara County Medical Society.

WHEREAS, Section 2718 of the Nursing Practice Act provides that the Board of Nurse Examiners shall appoint from a list of names presented by the C.M.A. the representatives who shall serve on the Advisory Council to the Board of Nurse Examiners; and

WHEREAS, This procedure enables the Board of Nurse Examiners to obtain only the advice it chooses to obtain; now, therefore, be it

Resolved, That the Legislative Committee of the California Medical Association take steps to amend the Nursing Practice Act to enable the medical profession to have a more effective voice in nursing education.

ACTION: Adopted by House.

* * *

DOCTOR-HOSPITAL RELATIONS

Resolution No. 71.
Author: Grant Ellis.
Representing: District 9 Delegation.

WHEREAS, The practice of radiology is a medical service and not a hospital service; and

WHEREAS, California law prohibits the practice of medicine by a corporation; and

WHEREAS, There exists at present an embarrassing inequity between radiologists who practice in hospitals under contracts of various kinds and radiologists who are in private practice of radiology; and

WHEREAS, The implementation of this resolution need not adversely affect revenue hospitals derive from the operation of x-ray departments; now, therefore, be it

Resolved, That the California Medical Association declare to all California hospitals having x-ray departments that radiologists who are members of the California Medical Association and who practice in hospitals shall practice as free and independent physicians with complete authority to conduct and supervise the operation of the x-ray department, and that the radiologist shall formulate all fees and if he desires shall submit and collect bills in his own name, and that there shall be no employer-employee relationship between hospitals and radiologists, and that radiologists' services be paid as medical services.

ACTION: Adopted by House.

RESOLUTIONS REFERRED TO COUNCIL

The following resolutions, by vote of the House of Delegates, were referred to the Council for further study and such action as the Council might wish to take. The Council will report back to the House of Delegates its decisions on the subjects involved.

* * *

INDIGENT CARE

Resolution No. 18.
Author: Eleventh C.M.A. District.
Representing: Eleventh C.M.A. District.

WHEREAS, Recent acts of the Congress of the United States and the Legislature of the State of California have brought on the people of the Nation and of this State an initial form of government controlled medicine which is bureaucratic, arbitrary and subject to governmental whim and mismanagement; and

WHEREAS, This is contrary to the best interests of the health of the elderly people of this State; and

WHEREAS, Politicians have further put in provisions which give nonindigent and nondeserving persons access to these medical services; and

WHEREAS, This is a further imposition on the taxpayers, statewide and nationwide; and

WHEREAS, These medical acts do indeed represent a relative failure of our public relations and legislative programs with the Legislature, Congress and the people at large; and

WHEREAS, Even more and greater abuses and inequities are apparent in the proposed Forand bill pending before the United States Congress; now, therefore, be it

Resolved: 1. That the House of Delegates instruct the Council of the California Medical Association to set up a specially designated committee to study, anticipate, educate, and, in the very best interests of the people of this State, prepare for similar legislation that will surely be presented in the not too distant future to our state lawmakers;

2. That this committee be empowered to engage the services of public relations experts and any others whose special aptitudes and qualifications might make their services of value;

3. That this House authorize this committee, subject to approval by the Council, to spend any reasonable sums to further this public relations and legislative program;

4. That should it become necessary, the Council be authorized to levy any assessments necessary to make this program successful; and be it further

Resolved, That this House of Delegates instruct the delegates to the American Medical Association to present resolutions similar to this in interest and purpose, at the coming session of the American Medical Association in San Francisco.

ACTION: Referred to Council.

(Comment by Reference Committee No. 3: "This resolution contains a number of subjects, many of which are already in Council. Some of the subjects have already been disposed of by other resolutions . . . refer to the Council for further consideration.")

* * *

ESTABLISHMENT OF BETTER COMMUNICATIONS

Resolution No. 23.

Author: Charles D. Armstrong.

Representing and endorsed by San Mateo County Medical Society.

WHEREAS, There seems to be some dissatisfaction regarding the role of the California Medical Association Council in carrying out the wishes of California Medical Association members; now, therefore, be it

Resolved, That the California Medical Association appoint a properly constituted committee to accomplish the following functions:

1. Critically investigate the present system of representation in the California Medical Association and establish the validity of any complaints.

2. In the event valid deficiencies exist, recommend constitutional changes to correct them.

3. Suggest constitutional changes that clearly delineate the exact responsibility of the Council to act for the California Medical Association.

4. Consider use of opinion surveys on a county and state level, and, if appropriate recommend a mechanism to accomplish this.

5. Consider the institution of a system of monthly reports to the California Medical Association Council from constituent medical societies as a means of keeping the California Medical Association Council continuously posted on the views of the California Medical Association members.

6. Consider the institution of a system of monthly reports from the California Medical Association Council to constituent medical societies relative to Council activities and in particular, their proposed actions to keep the membership continually informed.

7. Report back to the House of Delegates, for approval, any other workable plan that the committee may devise to improve communications within the California Medical Association.

ACTION: Referred to Council.

(Comment by Reference Committee No. 3B: "Communications in an organization approximating 16,000 physicians, many of whom find little time for political or economic considerations due to their great interest in the scientific aspects of the practice of medicine, are always very cumbersome. The C.M.A. Council, the various committees, both state and local, the county medical societies, and even hospital staff organizations have struggled with this problem which apparently continues to mount. Any suggestion which might help to relieve this situation should certainly be considered. Although this resolution contains a variety of suggestions, some of which might well be difficult to implement, your committee is of the opinion that these suggestions should be forwarded to the Council of the C.M.A.")

* * *

STUDY COMMITTEE—IMPACT OF SOCIALISM

Resolution No. 42.

Author: Peter Blong.

Representing: Los Angeles County Medical Association.

WHEREAS, Bureaucratic socialism has been on the march; and

WHEREAS, Medicine is now suffering from the same; now, therefore, be it

Resolved, That the California Medical Association implement a committee to study the impact of socialism on the practice of medicine, and to offer means of relief from the same.

ACTION: Referred to Council.

(Comment by Reference Committee No. 3: "The committee feels that the resolution in implementing another committee will duplicate the work of an established committee.")

* * *

C.M.A. USE OF COUNTY SOCIETIES' PERSONNEL

Resolution No. 48.
Author: Anthony S. Felsovanyi.
Representing: Santa Clara County Medical Society.

WHEREAS, There is an evident and increasing need for experienced personnel to serve and assist the members of the various Commissions and Committees of C.M.A. in the pursuance of their objectives and obligations; and

WHEREAS, The need for such services and assistance is most often for part-time personnel with specific interests or experience rather than full-time personnel; and

WHEREAS, There are now 14 experienced and qualified full-time executive secretaries employed by component societies of the C.M.A., and 11 other persons serving 10 other societies in various capacities; now, therefore, be it

Resolved, That the House of Delegates encourage the C.M.A. Commissions to utilize the services of such persons and that the House of Delegates recommend that the Council of C.M.A. approve the use and part-time employment of such persons by C.M.A. Commissions and Committees; and be it further

Resolved, That reimbursement or compensation for such services be made to the respective county medical society or directly to the person so employed, on a basis that is mutually agreeable to the county society-employer of the person and the C.M.A.

ACTION: Referred to Council.

(Comment by Reference Committee No. 3B: "Mr. John Hunton called attention of the committee to the fact that the county executive secretaries meet just prior to each C.M.A. Council meeting and are invited to be present at Council meetings at C.M.A. expense. This resolution suggests that the C.M.A. might gain much by use of the special knowledge and particular talents of this unique group. Details for the implementation of this plan might make it cumbersome in its execution.")

* * *

SPECIAL DIVISION OF THE A.M.A.

Resolution No. 63.
Author: A. Justin Williams.
Representing: San Francisco Medical Society.

WHEREAS, There continues to be increasing third party intervention, governmental and otherwise, between physician and patient to the detriment of good medical practice; and

WHEREAS, Third party intervention inevitably results in unnecessary and often arbitrary restrictions of medical practice and increased costs; now, therefore, be it

Resolved, That an entirely new special division of the American Medical Association be established and staffed with skilled, highly trained individuals responsible only to the A.M.A. Board of Trustees, and that the functions of this division should include

(a) To plan and execute a long range program of preserving the present system of medical practice and the rights of the individual physician to practice medicine in the manner of his choice.

(b) The formulation of further plans to meet the medical needs of the American people under the voluntary free enterprise system.

(c) To offer positive advice and assistance to state and local societies as to courses of action to follow as specific threats to voluntary medical care arise in their areas; and, be it further

Resolved, That the C.M.A. delegates to the A.M.A. introduce a similar resolution to the A.M.A. House of Delegates at the forthcoming meeting.

ACTION: Referred to Council.

(Comment by Reference Committee No. 3: "Because the content of this resolution involves the A.M.A. Board of Trustees, it is felt advisable that it be referred to the Council for further study and action.")

REFERRED TO COMMITTEE

One resolution, No. 60, was referred by the House of Delegates to the Committee on Claims Forms, a subcommittee of the Commission on Medical Services. This resolution reads as follows:

INSURANCE CLAIM PROCESSING

Resolution No. 60.
Author: F. J. Novak.
Representing: San Mateo County.

WHEREAS, Insurance claim processing in doctors' offices is an increasingly heavy burden; and

WHEREAS, Present claim processing is done by antiquated hand methods; therefore, be it

Resolved, That the California Medical Association appoint a committee to work out the possibility of having the many insurance companies pool their claims departments and form a central clearing house for claim processing. Such a clearing house should utilize the available electronic machines for less costly and speedier claim processing.

CONSTITUTIONAL AMENDMENTS ADOPTED

The Constitution of the California Medical Association was amended at the 1958 Annual Session when the House of Delegates by the required two-thirds vote adopted these amendments which had been lying on the table for one year and had been published in two separate issues of the official journal, as required by the Constitution.

As originally introduced, an additional amendment to apply to Section 14 of Article III, Part B, of the Constitution was included with the three amendments shown here. The House of Delegates voted against the proposed amendment to Section 14 and, instead, approved a By-Law amendment to provide a method of election of District Councilors.

As adopted by the House of Delegates, the amendments to the Constitution will make these sections read as follows:

AMENDMENTS

ARTICLE III

Part B—Council

Section 9—Composition

The Council shall consist of:

(a) Each Councilor District, as specified in this Constitution, shall be entitled to one Councilor for each 1,000 members, according to its membership as of the first day of November of the preceding year; provided that each Councilor District shall be entitled to a minimum of one Councilor.

(b) The President, President-Elect, Speaker and Vice-Speaker.

In addition, the Secretary-Treasurer, and Editor ex-officio, without the right to vote.

(c) District Councilors shall be elected from the Councilor Districts.

(d) Elected Councilors from any one District shall not, at any time, exceed forty per cent (40 per cent) of the total Council membership.

Section 10—Councilor Districts

There are ten districts as follows:

District Number One, comprising San Diego County.

District Number Two, comprising Imperial, Orange, Riverside, San Bernardino, Mono and Inyo Counties.

District Number Three, comprising the County of Los Angeles.

District Number Four, comprising Ventura, Santa Barbara and San Luis Obispo Counties.

District Number Five, comprising Kern, Kings, Tulare, Fresno, Madera, Mariposa, Merced, Stanislaus, San Joaquin, Calaveras and Tuolumne Counties.

District Number Six, comprising Monterey, San Benito, Santa Cruz, Santa Clara and San Mateo Counties.

District Number Seven, comprising San Francisco County.

District Number Eight, comprising Alameda County and Contra Costa County.

District Number Nine, comprising Marin, Solano, Napa, Sonoma, Lake, Mendocino, Humboldt and Del Norte Counties.

District Number Ten, comprising Sacramento, Amador, Alpine, Eldorado, Placer, Nevada, Sierra, Yuba, Sutter, Yolo, Colusa, Glenn, Butte, Plumas, Tehama, Trinity, Shasta, Lassen, Modoc and Siskiyou Counties.

Section 11—Election of Councilors

District Councilors shall be elected by vote of the delegates from each district in the manner and at the time specified in the by-laws; provided, however, that at the first meeting of the House of Delegates after a District Councilor has been selected, his name shall be submitted to the House by the delegates from the district, and (1) if there is no challenge by any delegate then the Speaker shall declare his election completed, and (2) if any delegate shall challenge the election on any ground, including fitness of the nominee of the district to serve as a District Councilor, the questions presented by the challenge shall be submitted to a Qualifications Committee consisting of the President, President-Elect and one delegate, appointed by the Speaker, from the Councilor District involved. The Qualifications Committee shall consider all grounds upon which the nominee is challenged and report back to the House. If the committee reports in favor of confirming the nominee's election, the Speaker shall declare him elected. If the committee reports against confirming the nominee's election, a three-fourths affirmative vote shall be necessary to sustain the report of the committee, in which event the nominee shall be ineligible to serve as the District Councilor and the delegates from the district shall immediately proceed to the selection of another nominee for the vacant office. If an adverse report of the Qualifications Committee is not sustained then the nominee shall be declared elected by the Speaker.

BY-LAW AMENDMENTS ADOPTED

The House of Delegates adopted a series of By-Law amendments at its 1958 Annual Session. Under the requirements of the By-Laws, all amendments must lie on the table for 24 hours before being acted upon. The amendments shown here were introduced at the first session of the House of Delegates on April 27, were referred to Reference Committee No. 4 and reported back, for vote, at the April 30 session.

By-Law amendments approved are shown here in the manner in which they were introduced and adopted. This presentation does not show the resultant wording of each section affected but defines the wording or paragraph in which a change was made.

Where parentheses and italics are used in the amendments shown, the words in parentheses have been deleted from the former By-Law section and the words in italics have been added.

Proposed amendments that were not adopted are not recorded in this abridged report.

* * *

REDUCTION OF DUES

By-Law Amendment No. 2.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Chapter X, Section 3, of the By-Laws be amended so that paragraph (a) of that section be amended to delete the words shown here in parentheses and to add the words shown here in italics, so that this paragraph shall read as follows:

(a) Those active members who have been in the practice of medicine for less than (one) *three* years on the first day of the calendar year for which such dues were payable, may be reduced to (one-fourth regular dues) *such sum as the Council may recommend and the House of Delegates approve.*

And be it further

Resolved, That paragraph (b) and paragraph (c) of Chapter X, Section 3, of the By-Laws be deleted. And be it further

Resolved, That paragraph (d) of Chapter X, Section 3, be amended by deleting all language starting with the last syllable of the seventh line, relating to the dues of members who have reached the age of 70 years, and substituting therefor the following ". . . excused from the payment of annual dues."

* * *

AUDITING COMMITTEE

By-Law Amendment No. 3.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That the name of the Auditing Committee be changed to Finance Committee, and to accomplish that change, that Chapter VI, Section 7, of the By-Laws be reworded so that the term "Finance Committee" is substituted for the term "Auditing Committee" in the title and the text of the section; and be it further

Resolved, That Chapter X, Section 1, of the By-Laws be deleted in its present form and the following substituted:

CHAPTER X—FUNDS, PROPERTY, BUDGET AND ASSESSMENTS

Section 1—Preparation of Budget

The Finance Committee shall prepare each year a budget of anticipated income and expenditures, to apply to the succeeding fiscal year of the Association. The budget shall be prepared in consultation and with the cooperation of officers, commission and committee chairmen, administrative employees and others with a knowledge of the needs of the Association.

Prior to the Annual Session in each year the Finance Committee shall present the proposed budget to the Council for its approval, and the budget as approved by the Council shall be submitted by it to the House of Delegates.

And be it further

Resolved, That Chapter X, Section 6, of the By-Laws be amended as to the second paragraph of that section so that the words shown below in parentheses shall be deleted and the words shown in italics be inserted, so that the paragraph shall read as follows:

The (Auditing) *Finance* Committee shall inspect all bills and no demands or claims against the Association shall be paid and no funds or moneys of the Association be withdrawn from any depositary thereof except upon (written) approval of (a majority of all) the members of the (Auditing) *Finance* Committee on check or draft signed by (any two) persons authorized by the Council, providing all such authorized signers are under bond.

* * *

MEMBERSHIP COUNT

By-Law Amendment No. 4.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Chapter IX, Section 2, Subsection (h), of the By-Laws be amended by deleting the words shown below in parentheses and inserting the words shown below in italics, so that the section shall read as follows:

(h) Register of Component Society, Their Members and Officers. He shall keep a register of all component societies, their respective officers, and of all members of the Association, with their addresses. He shall print in the *December or* January (or February) issue of the official journal the number of active members of each component society as of (November) *September* 1st of the preceding year.

* * *

CHAIRMAN OF THE COUNCIL

By-Law Amendment No. 5.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Chapter IX, Section 3, of the By-Laws be amended by adding the words shown below in italics, so that the section shall read as follows:

Section 3—Duties and Powers of the Chairman of the Council

The Chairman of the Council shall preside at all meetings of the Council. He shall *be authorized to* sign all contracts and agreements, conveyances, transfers and other instruments (other than advertising contracts) to which the Association is a party, the execution of which has been authorized by the Council or the House of Delegates. He shall *be authorized to* sign all checks or drafts. . . .

Balance of the section to remain in present language.

* * *

JUDICIAL COMMISSION

By-Law Amendment No. 6.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Chapter III, Section 1, Subsection 6, of the By-Laws of the California Medical Association be amended as to the second paragraph of that section, so that the words shown in parentheses below shall be deleted and the words shown in italics shall be added:

(Either the Council or the Executive Committee) *The Judicial Commission* of the California Medical Association, whenever it shall come to (the) *its* attention (of either) that a disciplinary proceeding is pending before any component society, may . . .

Balance of the section to remain in present language.

And be it further

Resolved, That Chapter III, Section 1, Subsection 10, of the By-Laws be amended as to both paragraphs of that section by deleting the word "Council" and substituting therefore the words "Judicial Commission."

SECRETARY-TREASURER

By-Law Amendment No. 7.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Chapter IX, Section 2, of the By-Laws be amended to delete the word "-Treasurer" from the title of the section, so that the title refers to "Secretary" as one of the named persons.

And be it further

Resolved, That Chapter IX, Section 2(a), of the By-Laws be amended to delete the words shown here in parentheses, so that the subsection shall read:

(a) Minutes. The Secretary (-Treasurer, [who may also be referred to as Secretary or Treasurer]) shall attend the general meetings of the Association, the meetings of the House of Delegates *and* of the Council, (and of the Executive Committee) and shall keep minutes of their respective proceedings in separate record books.

And be it further

Resolved, That the title "Secretary-Treasurer" be amended to read "Secretary" in Chapter IX, Section 2, Subsections (a), (d), (e), (o), and (p); in Chapter II, Sections 2(a) and 2(b); in Chapter VI, Section 13; in Chapter VII, Section 10; in Chapter X, Section 6 and 7, and in any other chapter or section in which this title is now used as "Secretary-Treasurer."

* * *

EXECUTIVE COMMITTEE

By-Law Amendment No. 8.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That the Executive Committee be abolished and that a new committee to be known as the Advisory Committee for Emergency Action be established in its place; that, to accomplish this, Chapter VI, Section 6, of the By-Laws is hereby deleted in its entirety; and be it further

Resolved, That a new Chapter VI, Section 6, of the By-Laws is hereby adopted, to read as follows:

Section 6—Advisory Committee for Emergency Action

The Advisory Committee for Emergency Action shall consist of the President, the President-Elect, the Chairman of the Council and the Speaker of the House of Delegates.

It shall have no policy-making powers and shall function only under the direction of the Council. Its actions shall be subject to review and approval by the Council and it shall act only on matters requiring urgent decision while the Council is not in session.

And be it further

Resolved, That Chapter III, Section 1, Subsection 6, of the By-Laws be amended by deleting the phrase "or the Executive Committee" from the second paragraph of the section.

And be it further

Resolved, That the phrase "Executive Committee" or any reference to it or its chairman be deleted from Chapter VI, Section 10 and 15 and from Chapter IX, Section 2, Subsections (a), (i) and (r).

* * *

AMENDMENT TO BY-LAWS

By-Law Amendment No. 13.
Author: S. J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Section 6 of Chapter VIII of the By-Laws of the California Medical Association be amended by changing the title of said section to read as follows: "Election of District Councilors in Districts Having One Councilor"; and be it further

Resolved, That a new Section 6.5 be added to Chapter VIII of said By-Laws to read as follows:

Section 6.5—Election of District Councilors in Districts Having More Than One Councilor

Immediately on the adoption of this section, and in succeeding years at least twenty-four hours prior to the second meeting at each annual session of the House of Delegates, the Delegates from those Districts in which more than one Councilor vacancy exists or is about to occur shall separately meet and in each such District the Delegates shall elect a chairman and a secretary.

At the first such caucus in each such District, the aggregate number of vacancies existing shall be divided into Offices No. 1, No. 2 et seq, with Offices Nos. 1, 4 and succeeding multiples of three carrying an initial term of one year and then thereafter terms of three years; with Offices Nos. 2, 5 and succeeding multiples of three carrying initial terms of two years and thereafter terms of three years; and with offices Nos. 3, 6 and succeeding multiples of three carrying initial terms of three years and thereafter terms of three years.

Nominations shall then be received for each individually numbered office in which a vacancy exists, and in each instance where there is more than one nomination, election shall be by secret ballot and majority vote of the Delegates present and voting. The chairman of the District delegation shall then report to the House of Delegates the results of the election, and when such report is made, the members elected shall thereupon assume office as District Councilors, subject to the provisions of the Constitution and By-Laws.

At the second and succeeding caucuses the Delegates in each such District shall by nomination, secret ballot and majority vote of the Delegates present and voting, elect District Councilors for each individual numbered District Councilor office from such District for which a vacancy is about to occur, and the chairman of the District delegation shall report at the second meeting of the House of Delegates the results of the election, and when such report is made, the member or members elected shall assume office as a District Councilor or District Councilors, subject to the provisions of the Constitution and By-Laws.

The time and place of the caucus of each District delegation shall, in the absence of unanimous written consent of the Delegates of the District fixing time and place, be fixed by the Speaker and announced at the first meeting of the House of Delegates at each annual session; except that on the adoption of this section, the Speaker shall immediately announce a time and place for the immediate caucus of each District that is at the time of said adoption, entitled to more than one District Councilor.

In the event there are more than two nominees at any District caucus for any of the individual numbered offices of District Councilor in said District and none of such nominees receives a majority of the votes cast on the first ballot, the nominee receiving the smallest number of votes on such ballot shall be eliminated and a second ballot shall be taken on the remaining nominees, such process to continue until one such nominee shall receive a majority of the votes cast.

* * *

JUDICIAL COMMISSION

By-Law Amendment No. 15.
Author: Donald A. Charnock.
Representing: Judicial Commission.

The Judicial Commission requests that Chapter III, Section 3 (paragraph 4) be changed to read:

"In every case of an appeal the Judicial Commission of this Association, through a committee thereof, prior to any hearing being held upon appeal may exert all proper efforts at conciliation and compromise."

* * *

AMENDMENT TO BY-LAWS—JUDICIAL COMMISSION

By-Law Amendment No. 16.
Author: John Blum.
Representing: District 9 Delegation.

Whereas, Chapter 3, Section 1, Paragraph 9, of the By-Laws of the California Medical Association relative to disciplinary procedures limits the discretion of the Judicial Commission of the California Medical Association in providing that no member may be suspended for a period longer than one year; and

WHEREAS, When a member of the C.M.A. is suspended under this paragraph it is mandatory that he be reinstated into membership after the period of one year, regardless of his behavior during that period of suspension; now, therefore, be it

Resolved, That Chapter 3, Section 1, Paragraph 9, of the By-Laws of the California Medical Association be amended to delete the words "provided that in no case shall a member be suspended for a period greater than one year"; and be it further

Resolved, That this paragraph be further amended to add the words—"The Judicial Commission, at the end of the suspended member's period of suspension, may consider the quality of his behavior during his suspension in determining whether he shall be readmitted to the Society."

BY-LAW AMENDMENT OFFERED

One By-Law amendment was offered at the April session of the House of Delegates by Reference Committee No. 4, the committee to consider proposed amendments to the Constitution and By-Laws. Since all proposed amendments to the By-Laws are required to lie on the table for 24 hours before being acted upon, this amendment must await the next regular session of the House of Delegates before it can be voted upon. The proposed amendment to the By-Laws reads as follows:

AMENDMENT TO BY-LAWS

By-Law Amendment No. 1.
Author: J. B. Price.
Representing: Reference Committee No. 4.

Resolved, That Chapter VII, Section 1, of the By-Laws be amended as follows:

First, delete subsection (b) and insert

"(b) *Commission on Public Health,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Rural and Community Health,
2. Committee on School Health,
3. Committee on Mental Health,
4. Committee on Industrial Health.

"(c) *Commission on Public Agencies,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Military Affairs and Civil Defense,
2. Committee on State Medical Services,
3. Committee on Veterans Affairs,
4. Committee on Other Professions,
5. Committee on Blood Banks,
6. Committee on Allied Health Agencies.

Secondly, re-letter the following subsections from (c) to (d) through (1).

Except as herein amended, said Chapter VII. Section 1, shall remain unchanged.

CONSTITUTIONAL AMENDMENTS OFFERED

Four proposed amendments to the Constitution of the California Medical Association were presented at the 1958 House of Delegates. Under the terms of the Constitution, these proposed amendments must lie on the table for one year, or until the next regular session of the House of Delegates. Meanwhile, they must be published at least twice, in separate issues of the official journal.

All members of the Association, and especially the members of the House of Delegates, will thus have the opportunity to review these proposals during the coming year. They will be presented to the 1959 House of Delegates for vote, on which a two-thirds affirmative vote of those Delegates present and voting is required for passage.

* * *

SECRETARY-(TREASURER)

Constitutional Amendment No. 1.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Article VI, Section 1, of the Constitution be amended by deleting the term "-Treasurer" from the present term "Secretary-Treasurer" so that the named officer shall be known as "Secretary."

* * *

REPRESENTATION IN HOUSE OF DELEGATES

Constitutional Amendment No. 2.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part A, Section 2, of the Constitution of the California Medical Association be amended by deleting the words shown in parentheses below, so that the section shall read as follows:

Section 2—Representation

As the By-Laws shall provide, each component society shall be entitled to proportionate representation in the House of Delegates (but with a minimum of two delegates).

* * *

REPRESENTATION ON THE COUNCIL

Constitutional Amendment No. 3.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part B, Section 9, of the Constitution be amended in subparagraph (a) by deleting the words shown in parentheses below and adding the words shown below in italics, so that subparagraph (a) shall read as follows:

(a) Each Councilor District, as specified in this Constitution, shall be entitled to one Councilor for each 1,000 *active* members, *or major fraction thereof,* according to its membership as of the first day of (November) *September* of the preceding year; provided that each Councilor District shall be entitled to a minimum of one Councilor.

* * *

DELEGATES FROM SECTIONS

Constitutional Amendment No. 4.
Author: A. B. Sirbu.
Representing: San Francisco Medical Society.

WHEREAS, The scientific sections constitute an important part of the structure of the C.M.A.; and

WHEREAS, The sections are not represented in the legislative body of the C.M.A., the House of Delegates; and

WHEREAS, The sections of the A.M.A. have for many years been represented in its House of Delegates; and

WHEREAS, Each section of the C.M.A. has much to contribute toward policy making, both in the scientific and the economic phases of medicine; now, therefore, be it

Resolved, That each section of the C.M.A. be entitled to send one delegate with full voting rights to the House of Delegates of the C.M.A.; and be it further

Resolved, That the C.M.A. Constitution be amended to allow for such representation as follows: Article III, Section 1 amended by the addition of (e) Delegates elected by each scientific section as listed in Chapter IV, Section 1-a of the By-Laws.

* * *

CONSIDERATION OF CONSTITUTIONAL AMENDMENTS

Constitutional Amendment No. 5
Author: W. S. Lawrence.
Representing: Butte-Glenn Medical Society.

WHEREAS, Any amendment to the Constitution should be for the greatest good of the Association; and

WHEREAS, The most recent amendment to the Constitution which eliminates the Councilors-at-Large was passed without prior hearings in the appropriate reference committee during any regular session of the Association; and

WHEREAS, This action has denied interested delegates the opportunity to meet, exchange views, discuss the ramifications and evaluate the appropriateness of the Amendment to meet its purpose; and

WHEREAS, The proponents of the amendment would be the last to feel the necessity to press such an action through the House of Delegates without adequate consideration; now, therefore, without prejudice to the previous amendment, be it

Resolved: That Article VIII, Section 3, Paragraph 2 of the Constitution be amended by addition of the following:

"Further, such proposed amendment or amendments shall be referred to the appropriate Reference Committee who shall hold hearings on the proposed amendment or amendments during the course of its regular business while the Association is in convention. If the proposal or proposals are introduced during the first session of the House, hearings shall be held at both the current and the next regular meeting. If the proposal or proposals are introduced during the second session, hearings shall be held at the next meeting, and in either event, prior to submission to the House of Delegates for vote.

ELECTION RESULTS

Elections held by the House of Delegates in its final session April 30 saw Doctor T. Eric Reynolds of Oakland elected as President-Elect of the California Medical Association for 1958-1959.

Doctor James C. Doyle was reelected Speaker of the House of Delegates and Doctor Ivan C. Heron was chosen as Vice-Speaker.

In the election of Councilors, who are selected by their own District Delegations, Doctors James C. MacLaggan of San Diego and Warren L. Bostick of San Rafael were chosen by their districts to serve additional three-year terms as Councilors and Doctor Burt L. Davis of Palo Alto was named by his district for a new three-year term.

Los Angeles County, entitled to six District Councilors under the terms of the revised Constitution, chose Doctors Malcolm Todd of Long Beach and Arthur A. Kirchner of Los Angeles to serve one-year terms, Doctors Paul D. Foster of Los Angeles and Joseph P. O'Connor of Pasadena for two-year terms and Doctors J. Norman O'Neill of Los Angeles and Gerald W. Shaw of Santa Monica for three-year terms.

In selecting Delegates to the A.M.A. the House of Delegates reelected Doctors Leopold H. Fraser, E. Vincent Askey, Dwight L. Wilbur, Donald Cass, J. Lafe Ludwig, R. Stanley Kneeshaw, C. J. Attwood and James E. Feldmayer for additional two-year terms. The House also elected Doctor Donald A. Charnock a Delegate, to fill the new office created by the Association's membership growth.

As Alternate Delegates, incumbents Hartzell H. Ray, Francis J. Cox, J. Norman O'Neill, H. M. Van Dyke, Burt Davis, Arlo A. Morrison were all reelected for two-year terms. Doctor Ralph C. Teall was chosen as Alternate to succeed Edward C. Rosenow, Jr., and James C. Doyle was picked to fill the unexpired term of Donald A. Charnock for the balance of 1958 and for an additional two-year term. As the new Alternate the House picked Doctor Carl M. Hadley of San Bernardino.

Upon nomination by the Council, the House of Delegates reelected Doctors Dave F. Dozier and Arlo A. Morrison, Mr. Thomas Hadfield and Rt. Rev. Msgr. Thomas J. O'Dwyer as members of the Board of Trustees of California Physicians' Service. Also nominated by the Council and approved by the House was Doctor Paul Hoagland of Pasadena, to fill an unexpired term of office.

In accordance with the By-Laws of C.P.S. the Council also selected from its own membership Doctors Ivan C. Heron, Gerald W. Shaw and Burt L. Davis as Trustees of C.P.S. for the coming year.

* * *

In its own elections and appointments, the Council at an organization meeting held April 30 reelected Doctor Donald D. Lum as Chairman of the Council and chose Doctor Samuel R. Sherman as Vice-Chairman. Doctor Albert C. Daniels was reappointed Secretary and Doctor Dwight L. Wilbur was renamed Editor. Mr. John Hunton was reappointed Executive Secretary and the firm of Peart, Baraty & Hassard was reappointed as legal counsel.

In Memoriam

ATLAS, LAWRENCE N. Died May 22, 1958, aged 52. Graduate of Western Reserve University School of Medicine, Cleveland, Ohio, 1930. Licensed in California in 1952. Doctor Atlas was a member of the Los Angeles County Medical Association.

✤

BERGMAN, GEORGE CLYDE. Died December 21, 1957, aged 60. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1924. Licensed in California in 1924. Doctor Bergman was a member of the Los Angeles County Medical Association.

✤

CHADWICK, GLENN WILLIAM. Died March 12, 1958, aged 34. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1951. Licensed in California in 1951. Doctor Chadwick was a member of the Los Angeles County Medical Association.

✤

GUINAN, EDWARD ROBERT. Died in Palo Alto, May 26, 1958, aged 69, of congestive heart failure, pneumonia, and bronchogenic carcinoma. Graduate of Cooper Medical College, San Francisco, 1911. Licensed in California in 1911. Doctor Guinan was a retired member of the Alameda-Contra Costa Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✤

HERMAN, BORIS S. Died in San Francisco, May 8, 1958, aged 68. Graduate of the College of Physicians and Surgeons of San Francisco, 1919. Licensed in California in 1919. Doctor Herman was a member of the San Francisco Medical Society.

✤

KERR, WILLIAM J., JR. Died in Marin County, May 27, 1958, aged 39. Graduate of Harvard Medical School, Boston, Massachusetts, 1944. Licensed in California in 1946. Doctor Kerr was a member of the Marin County Medical Society.

✤

PARKER, CARL HORACE. Died in Pasadena, May 15, 1958, aged 75. Graduate of Rush Medical College, Chicago, Illinois, 1909. Licensed in California in 1909. Doctor Parker was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✤

SCHEPPLER, GEORGE CAROL. Died April 18, 1958, aged 41, of injuries received in an automobile collision. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1945. Licensed in California in 1945. Doctor Scheppler was a member of the Humboldt County Medical Society.

✤

SCHWING, HAROLD EDWARD. Died in Sacramento, May 18, 1958, aged 64. Graduate of the University of Buffalo School of Medicine, New York, 1923. Licensed in California in 1930. Doctor Schwing was a member of the Sacramento Society for Medical Improvement.

Annual Meeting

Civic Auditorium

SAN FRANCISCO

February 22 to 25, 1959

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) no later than September 1, 1958.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association no later than September 1, 1958. (No exhibit shown in 1958, and no individual who had an exhibit at the 1958 session, will be eligible until 1960.)

Medical Motion Pictures

There will be facilities available for motion pictures. If you would like to exhibit a film, send your application to Dr. Paul D. Foster, 1930 Wilshire Boulevard, Los Angeles 57. The deadline is October 15, 1958.

SCIENTIFIC PAPERS
SCIENTIFIC EXHIBITS
MEDICAL MOTION PICTURES
PLANNING MAKES PERFECT
AN EARLY START HELPS

SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY	**George F. Harsh**	2001 Fourth Avenue, San Diego 1
ANESTHESIOLOGY	**Charles D. Anderson**	439 30th Street, Oakland 9
DERMATOLOGY AND SYPHILOLOGY	**Herbert L. Joseph**	607 Carolina Street, Vallejo
EAR, NOSE AND THROAT	**Ewing Seligman**	9735 Wilshire Boulevard, Beverly Hills
EYE	**A. Ray Irvine, Jr.**	2010 Wilshire Boulevard, Los Angeles 57
GENERAL PRACTICE	**James S. Eley**	624 Harris Street, Eureka
GENERAL SURGERY	**William F. Pollock**	2200 Santa Monica Boulevard, Santa Monica
INDUSTRIAL MEDICINE AND SURGERY	**Gandolph A. Prisinzano**	4041 H Street, Sacramento 19
INTERNAL MEDICINE	**Edward Shapiro**	123 North San Vicente Boulevard, Beverly Hills
OBSTETRICS AND GYNECOLOGY	**Donald R. Nelson**	2439 Ocean Avenue, San Francisco 27
ORTHOPEDICS	**Howard A. Mendelsohn**	415 North Camden Drive, Beverly Hills
PATHOLOGY AND BACTERIOLOGY	**Leo Kaplan**	8720 Beverly Boulevard, Los Angeles 48
PEDIATRICS	**Gordon L. Richardson**	10711 Riverside Drive, North Hollywood
PHYSICAL MEDICINE	**Carrie E. Chapman**	VA Hospital, 13th and Harrison Streets, Oakland 12
PSYCHIATRY AND NEUROLOGY	**John D. Moriarty**	7046 Hollywood Boulevard, Hollywood 28
PUBLIC HEALTH	**Carolyn B. Albrecht**	920 Grand Avenue, San Rafael
RADIOLOGY	**William H. Graham**	630 East Santa Clara Street, San Jose 12
UROLOGY	**Earl F. Nation**	112 North Madison Avenue, Pasadena 1

WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

WITH A SHORTER period than usual to achieve our customary objectives before the next annual meeting, which is to be in February next year, it seemed feasible to begin making visits to county auxiliaries in May while some of them were still having meetings before closing their fiscal year. So, the Monday following the annual convention in Los Angeles we took plane for "the north."

Shasta County was the first stop on our itinerary. The meeting in Redding was my first contact with these northern counties. Next stop Tehama, then Yuba, Sutter, Colusa and, after a week-end in San Francisco, Santa Cruz and San Mateo.

In each of the counties I found enthusiasm at top level. In Tehama County at Red Bluff a tight little group of eight members is making its efforts count in that thriving community. The Yuba-Sutter-Colusa auxiliary is carrying on a full program of our objectives. And so it goes: In each county, be the auxiliary large or small in numbers, the groups are contributing their fair share to their individual communities and to the combined efforts of all the counties in the state.

It would amaze some of the county medical society members if they would make it their business to ask these energetic wives of theirs to explain to them the whys and wherefores of their activities.

We think that our support of the medical program as directed by the California Medical Association is vital to the well-being of our world society, and we are ready and willing to help.

These auxiliaries are not just "women's clubs" or "bridge clubs." They devote their collective energies to intelligently planned projects that are important to the improvement of health in their communities. They are creating a public relations atmosphere for the physician—public contact that the physician himself would be unable to accomplish.

They are serving the Medical Association, and the public too, by the "woman's approach" to medical legislation, as it pertains to the efficiency of their ideals.

Both the American Medical Association and the California Medical Association spent a good deal of money recently for expert advice on the improvement of their over-all programs of management, and one of the important suggestions made by the experts (and accepted by the associations) was to form a closer alliance with their auxiliaries. May I humbly suggest, therefore, that on the county level the societies also avail themselves of the opportunity to learn first-hand of the potential embodied in the distaff side of their profession.

We think a simple solution and a gracious gesture of interest would be for each county society to appoint a member of the society to attend at least one general meeting of their auxiliary. He would be pleased with the results.

I wish you could all see the May fifteenth issue of the Los Angeles County Medical Association *Bulletin*—it was devoted to the activities of the local county auxiliary. Articles contributed were written and edited by members—pictures were numerous—beautiful, too.

Articles of appreciation and commendation by Lewis T. Bullock, M.D., president of the Los Angeles County Society; by the editor of the *Bulletin*, William F. Quinn, M.D., and by the Los Angeles County executive director, Edward C. Rosenow, Jr., M.D., were included and the "gals" are ecstatic—not only because of the feat accomplished by their large auxiliary, but because of the recognition on the part of a large county society of the value of the services rendered in its behalf.

We would be delighted if all of our county auxiliaries could achieve the same cooperation from their individual societies—it would give us statewide status and prestige as a reward for our efforts.

May we count on your county society support to this end?

MRS. NEWELL JONES,
President, Woman's Auxiliary to the
California Medical Association

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Charles E. Smith, dean of the University of California School of Public Health, has been selected as the recipient of the **John J. Sippy Memorial Award,** the highest honor of the Western Section of the American Public Health Association.

The award was bestowed on Dr. Smith in honor of his outstanding accomplishments and contributions in the field of public health as an educator, administrator and research investigator. It was presented at the joint annual meeting in Vancouver, B. C., of the Western Section of the A.P.H.A. and the Canadian Public Health Association.

Dr. Smith was cited for his investigations into the cause and diagnosis of coccidioidomycosis, for his role as dean of the U. C. School of Public Health and for his many contributions to national, state and local health programs.

* * *

The 1958 **Western Industrial Health Conference,** sponsored by the Western Industrial Medical Association, will be held October 3, 4 and 5, 1958, at the Claremont Hotel, Berkeley. Other participants in the conference are the Western Industrial Nurses Association, the American Industrial Hygiene Association, the American Society of Safety Engineers, and the American Conference of Governmental Industrial Hygienists.

The Western Industrial Medical Association will hold its own 17th annual meeting at the Claremont, October 4. Further information may be obtained from Dr. John E. Kirkpatrick, 516 Sutter Street, San Francisco 2, or Dr. A. C. Remington, 9851 Sepulveda Boulevard, Los Angeles 45.

LOS ANGELES

Correction: Dr. Adolph A. Kutzmann of Los Angeles was installed as president of the American Urological Association at the annual meeting in New Orleans.

A news item printed in this section in the June issue gave his name as Ralph.

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Following is a list of the new officers of the **Pediatric Section of the Los Angeles County Medical Association:** President, Dr. Wendell Redfern; vice-president, Dr. Morris Naiditch, and secretary-treasurer, Dr. Neil N. Litman.

SAN FRANCISCO

The California Medical Association lost a valued employee on June 10 when **Herbert A. Dady,** advertising manager of California Medicine, died in New York. Mr. Dady was on a business trip and was found dead in his hotel room the day before his intended departure for San Francisco.

Mr. Dady served in the advertising department of the Pacific Coast Edition of the *Wall Street Journal* for a number of years before World War II, at which time he entered the army and became a medical corpsman in the Pacific Theater. On his return in 1946 he joined the California Medical Association staff as advertising manager, a position he had filled with distinction until the time of his death.

Surviving Mr. Dady are his wife, mother, one sister and one brother.

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The National Institute of Neurological Diseases and Blindness has included **Children's Hospital,** San Francisco, in a nationwide research project which has been designated the **Collaborative Study of Cerebral Palsy and Brain Damage.** There are 14 other collaborating institutions. Apart from the University of Oregon, Children's Hospital is the only institution west of the Rockies participating in this study. It is one of the only two institutions which will be using private practitioners and private patients.

The objective of this study is a large scale ecological, statistically oriented survey to determine causative factors of central nervous system abnormalities in infants and children. Information about a large and random sample of pregnant women will be obtained and the children produced by these pregnancies will then be studied for the first six years of life. The infants and children will be given neurological, psychological and developmental examinations at designated ages up to six years.

* * *

Dr. Ernest S. Rogers was elected president of the San Francisco Heart Association at its annual meeting in June. Dr. Rogers succeeds Dr. Vernon C. Harp, Jr.

Two young scientists were honored by the association as **winners of the Kerr and Jones Awards.** Dr. Philip L. Dern, senior resident in medicine at Moffitt Hospital, University of California Medical Center, won the William J. and Dorothy Fish Kerr Prize for the best original clinical observation of heart patients. This award was established in 1957 to encourage young physicians in "the use of the special senses and the sense of touch at the bedside." Dr. Dern's observations concerned the "Pickwickian syndrome" or chronic drowsiness in obese patients.

The T. Duckett Jones Memorial Prize for an essay on rheumatic fever by a medical school undergraduate was awarded to Jordan R. Wilbur, president of the freshman class at the Stanford University School of Medicine. This prize was made possible by memorial contributions from friends and admirers of Dr. Jones in memory of his outstanding work in the field of rheumatic fever. Mr. Wilbur's essay discussed the problem of "Anxiety in Children with Rheumatic Fever."

* * *

The fifth annual series of **surgical symposia,** sponsored by the San Francisco Academy of General Practice, and to be given by the surgical service of the **Fort Miley Hospital** of the Veterans Administration in cooperation with the faculties of Stanford and University of California schools of medicine, will start on Tuesday evening, October 14, at 8 p.m. and continue each Tuesday evening for six weeks. The symposia will be moderated by Dr. Louis G. Brizzolara, formerly chief of the surgical service at Fort Miley.

The program and information may be obtained from Alex F. Fraser, chairman, Fort Miley Medical and Surgical Symposia, 3490 20th Street, San Francisco.

TULARE

Dr. Charles W. Folsom was appointed health officer of Tulare County, effective June 1. He replaced Dr. Elmo Zumwalt, the medical director of Tulare County Hospital, who had been serving temporarily as health officer since the death of Dr. Elmo Alexander earlier this year.

GENERAL

The American Urological Association has announced the opening of competition for its annual award of $1,000 (first prize $500, second prize $300, and third prize $200) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been graduated not more than ten years and to hospital interns and residents doing research work in urology.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Chalfonte-Haddon Hall, Atlantic City, New Jersey, April 20 to 23, 1959.

Full particulars may be obtained from the Urological Association's executive secretary, Mr. William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1, 1958.

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Plans have been made for the second annual convention of the **American Association of Medical Assistants** to be held at the Palmer House, Chicago, Illinois, on October 31 and November 1 and 2, 1958. Now a little more than two years since its formation, the association has a membership of nearly 6,000 distributed over 17 states.

The purposes of the association are to improve the services rendered by the assistants to the medical profession and to the public, to cooperate with the medical profession in improving public relations and to render educational services for the self-improvement of its members.

Inquiries about the association may be addressed to Miss Hallie Cummins, R.R.L., chairman of the Public Relations Committee, Medical Record Library, Caro State Hospital for Epileptics, Caro, Michigan.

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An interim meeting of the **American Institute of Ultrasonics in Medicine** will be held at the Bellevue-Stratford Hotel, Philadelphia, August 23, 1958. Further information may be obtained from Dr. John H. Aldes, 4833 Fountain Avenue, Los Angeles 29.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Techniques of Surgery. Monday through Friday (limited to 14), July 28 to August 1. Forty hours: Fee: $500.00.

Internal Medicine (at University of California Residential Conference Center, Lake Arrowhead), Wednesday through Saturday, August 20 to 23. Sixteen hours. Fee $150.00 (including room and meals).

Anesthesiology. Wednesday through Friday, August 27 through August 29. Sixteen hours. Fee: $50.00.

Minor Surgery—Lecture and Laboratory (Laboratory limited). Friday and Saturday, September 5 and 6. Twelve hours.*

Workshop for Food Service Workers I. Monday and Tuesday, September 15 and 16. Twelve hours. Fee: $15.00 includes luncheons.

Medical Terminology. Thursday nights, beginning September 18. Forty-five hours. Fee: $30.00.

Teaching Clinics. Thursday, September 18 to December 11. Twenty-four hours.*

St. Joseph Hospital, Burbank, Postgraduate Medical Lecture Series. Tuesdays, September 23 to December 9. Twenty-four hours.*

Calculations in Clinical Chemistry. Begins in September. Sixteen hours.*

Practical Clinical Chemistry for Laboratory Technologists. Begins in October. Twenty-four hours.*

Aviation Medicine. Wednesday, Thursday and Friday, October 22, 23 and 24. Nineteen hours.*

Removal of Foreign Bodies from Lung and Bronchi. Saturday and Sunday, November 8 and 9. Nine hours. Fee: $110.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Microbiology and Immunology in Clinical Medicine. Tuesday through Friday, July 22 through July 25. Sixteen hours. Fee: $40.00.

Refresher Course in Anatomy. Monday through Friday, July 28 through August 1. Thirty-five hours. Fee: $75.00.

Physiology and Pharmacology in Clinical Medicine. Monday through Tuesday, August 4 through August 12. Thirty-two hours. Fee: $75.00.

Fundamental Principles of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Postgraduate Instruction, Office of Medical Extension, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Division of Ophthalmology will present a course in Strabismus, consisting of lectures, demonstrations and seminars. Enrollment limited. August 27 through August 30.

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*Fee to be announced.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year Postgraduate Series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Special Announcement: From August 5 to August 21, 1958, the University of Southern California School of Medicine will hold a postgraduate course in Honolulu and on board the *S.S. Matsonia.* The course will center around actual case histories, which will be used to emphasize diagnostic and therapeutic features.

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Audio-Visual Postgraduate Refresher Courses. Courses are made up of four or more half-hour lectures each, recorded on hi-fi magnetic tape and illustrated by 35-mm. filmstrips or slides in full color, and adapted for use on any standard tape recorder and filmstrip or slide projector, automatic or manual.

Contact: Paul D. Foster, M.D., chairman, Committee on Audio-Visual Courses, College of Medical Evangelists School of Medicine, 316 North Bailey St., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE CIRCUIT COURSES

Sacramento Valley Circuit for Dunsmuir, Chico, Marysville and Auburn, in cooperation with Stanford University School of Medicine begins week of October 13, 1958.

North Coast Circuit for Eureka, Ukiah and Napa, in cooperation with University of California, San Francisco, begins week of October 13, 1958.

West Coast Circuit for San Luis Obispo, Santa Maria and Ojai, in cooperation with College of Medical Evangelists, November 11, 12 and 13, 1958.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel Californian, Fresno. (Local chairman not yet appointed.)

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25, 26 and 27, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

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Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued on November 1, 1958. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

JULY AND AUGUST MEETINGS

New Mexico Chapter Academy of General Practice Ruidosa Summer Clinic, July 21 through July 24, Ruidosa, New Mexico. *Contact:* Frederick R. Brown, M.D., secretary-treasurer, 207 N. Union, Roswell, New Mexico.

Western Regional Meeting, International College of Surgeons, Riverside Hotel, Reno, Nevada, August 21 to 23. *Contact:* Leo D. Nannini, M.D., 190 Mill Street, Reno, Nevada. For reservations, write Riverside Hotel, Reno, Nevada.

FALL AND WINTER MEETINGS

Oregon State Medical Society 84th Annual Session, September 3 to 5, Masonic Temple, Portland. *Contact:* Roscoe K. Miller, executive secretary, 1115 S. W. Taylor St., Portland 5, Oregon.

Saint John's Hospital Postgraduate Assembly, September 11 through September 14, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 22nd St. at Santa Monica Blvd., Santa Monica.

STOCKTON POSTGRADUATE STUDY CLUB 20th Annual Fall Series, September 11 to November 13, 8 p.m., College of Pacific Campus, Stockton. *Contact:* John F. Blinn, Jr., M.D., chairman, 936 N. Commerce St., Stockton.

WASHINGTON STATE MEDICAL ASSOCIATION Annual Convention, September 14 to 17, 1958, Spokane, Washington. *Contact:* Ralph W. Neill, executive secretary, 1309 Seventh Ave., Seattle, Wash.

TWELFTH ANNUAL POSTGRADUATE ASSEMBLY, September 17 and 18, San Diego County General Hospital, San Diego. *Contact:* William T. Nute, executive secretary, San Diego County Medical Society, 3427 Fourth Avenue, San Diego 3.

NEVADA STATE MEDICAL ASSOCIATION Annual Meeting, September 17 through 20, Elko, Nevada. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

PACIFIC DERMATOLOGIC ASSOCIATION Tenth Annual Meeting, September 18 through 20, Hotel del Coronado, Coronado, Calif. *Contact:* Louis H. Winer, M.D., secretary-treasurer, 9915 Santa Monica Blvd., Beverly Hills, Calif.

COLORADO STATE MEDICAL SOCIETY Annual Session, September 24 through 27, Broadmoor Hotel, Colorado Springs. *Contact:* Harvey T. Sethman, executive secretary, 835 Republic Bldg., Denver 2.

CALIFORNIA DIVISION OF THE AMERICAN CANCER SOCIETY Annual Meeting, October 1 to 4, Fairmont Hotel, San Francisco. On Wednesday, October 1, afternoon and evening, will be a cancer conference held for entire medical profession. *Contact:* Walter E. Batchelder, M.D., medical director, C.M.A. Cancer Commission, 450 Sutter St., San Francisco 8.

1958 WESTERN INDUSTRIAL HEALTH CONFERENCE sponsored by the Western Industrial Medical Association, October 3 to 5, Claremont Hotel, Berkeley. *Contact:* John E. Kirkpatrick, M.D., 516 Sutter St., San Francisco 2; or A. C. Remington, M.D., 9851 Sepulveda Blvd., Los Angeles 45.

CALIFORNIA ACADEMY OF GENERAL PRACTICE Tenth Annual Scientific Assembly, October 5 to 8, Masonic Temple, San Francisco. *Contact:* William W. Rogers, executive secretary, 461 Market Street, San Francisco 5.

FIFTH ANNUAL FORT MILEY SURGICAL CLINICS AND SYMPOSIA sponsored by the San Francisco Academy of General Practice in cooperation with Faculties of Stanford University School of Medicine and University of California School of Medicine at Fort Miley Veterans Administration Hospital, 42nd Avenue and Clement Street, San Francisco, will start on October 14, 1958 at 8 p.m. and each Tuesday thereafter ending November 18, 1958. *Contact:* Alexander F. Fraser, M.D., 3490 20th Street, San Francisco.

CALIFORNIA SOCIETY OF INTERNAL MEDICINE Annual Meeting, October 17 to 19, Ahwahnee Hotel, Yosemite. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Dr. Clyde C. Greene, secretary-treasurer, 350 Post St., San Francisco 8.

AMERICAN HEART ASSOCIATION Scientific Sessions and Meetings, October 24 to 28, Fairmont Hotel and Civic Auditorium, San Francisco. *Contact:* J. Keith Thwaites, executive director, California Heart Association, 1428 Bush Street, San Francisco 9.

LOS ANGELES COUNTY HEART ASSOCIATION 28th Annual Professional Symposium, October 29 and 30, Wilshire Ebell Theater. *Contact:* Los Angeles County Heart Association, 660 S. Western Ave., Los Angeles 5, DUnkirk 5-4231.

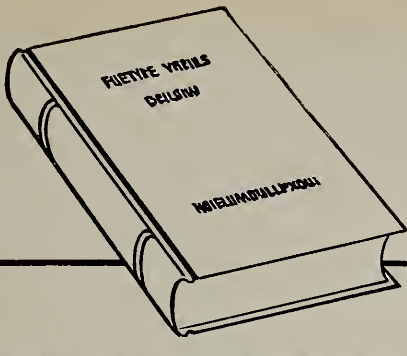
HAWAII HEART ASSOCIATION, INC. Special Cardiological Sessions, October 30 through November 1, Princess Kaiulani Hotel, Honolulu. *Contact:* Alfred S. Hartwell, M.D., c/o Hawaii Heart Association, 1018 Lunalilo St., Honolulu.

SAN DIEGO COUNTY HEART ASSOCIATION 8th Annual Symposium on Heart Diseases, all day, October 31, U. S. Naval Hospital Auditorium, San Diego. *Contact:* O. M. Avison, executive director, San Diego County Heart Association, 1651 Fourth Ave., San Diego, BElmont 4-5101.

SANTA BARBARA COUNTY HEART ASSOCIATION, Professional Symposium, 9 to 5 p.m., November 1, Biltmore Hotel, Santa Barbara. *Contact:* Mrs. Katherine McCloskey, executive director, 18 La Arcada Court, Santa Barbara.

CALIFORNIA SCHOOL HEALTH ASSOCIATION annual meeting, November 8 and 9, Hacienda Hotel, Fresno. *Contact:* Miss Kathleen Fox, health educator, City of Long Beach Department of Public Health, 2655 Pine Ave., Long Beach 6.

CALIFORNIA MEDICAL ASSOCIATION Annual Meeting, February 22 through February 25, 1959, Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary. 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.



THE PHYSICIAN'S *Bookshelf*

GENERAL TECHNIQUES OF HYPNOTISM—Andre M. Weitzenhoffer, Ph.D., Stanford University and Center for Advanced Study in the Behavioral Sciences (1956-1957). Grune and Stratton, Inc., New York, 1957. 460 pages, $11.50.

This is a volume devoted to a rather exhaustive review of hypnotic techniques. It presents the principles and implementation of these techniques in considerable detail, and the author's descriptions of methods are written in a lucid and graphic style.

The limitations of this volume, however, are considerable. For example, the author states in the preface that in the effective use of hypnosis recognition must be given to the psychological make-up of the subject or patient, and that "Such an approach calls for a thorough understanding of the dynamics of the situation." In the same chapter, however, he indicates that the portion of the book dealing with these dynamics may be found too difficult by some readers, and may be overlooked. In effect, this inconsistency suggests a sort of clinical irresponsibility in which the author implicitly subscribes to the practice of hypnotism without that very dynamic understanding which he previously defines as essential. This in many ways is tantamount to publishing a book on surgical techniques, and suggesting to the reader that if he finds anatomy, physiology, bacteriology, and pathology too difficult to understand, he may overlook these subjects, proceed on his surgical career, and perhaps pick up his theoretical knowledge on the way.

The volume contains occasional brief references to the dangers of hypnosis, and, to its credit, proclaims its undesirability as a public entertainment technique. Theoretical considerations contained in the "optional" chapter already alluded to are murkily handled, and psychoanalytic conceptions of hypnosis are presented, but arbitrarily rejected. It can be understood that the psychoanalytic attitude toward hypnosis is not convincing to the author because psychoanalysts view hypnosis as an extremely powerful interpersonal transaction which requires careful training of the hypnotist in theoretical and clinical psychodynamics. An author convinced of this principle would not be satisfied with the writing of a "do-it-yourself" book on the techniques of hypnotism.

H. R. Brickman, M.D.

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CORTISONE THERAPY—J. H. Glyn, M.A. (Cantab), M.D., M.R.C.P., D. Phys. Med., Consultant in Physical Medicine to the Prince of Wales and Tottenham Group of Hospitals, London, England. Mainly applied to the Rheumatic Diseases. Philosophical Library, Inc., Publishers, 15 E. 40th Street, New York 16, N. Y. 162 pages, $10.00.

The author has attempted to appraise the role of cortisone and its newer derivatives in the treatment of various disorders, but primarily the rheumatic diseases. The chapters dealing with the chemistry, pharmacology and side effects of these steroids are excellent and are highly recommended. There is an extensive discussion of the practical aspects of therapy in rheumatoid arthritis with particular reference to the selection of patients to be treated, schedules of dosage, precautions to be taken and problems likely to be met. Indications for intra-articular injections are described and are supplemented by an appendix showing anatomical approaches to the various joints.

There is a brief chapter discussing the use of corticosteroids in "collagen vascular" diseases, and in dermatological, gastrointestinal, respiratory, renal, ophthalmological, endocrine, hematologic and other disorders.

The author writes clearly and the material is well organized. Although aware of the need for brevity, he tends to be dogmatic and omit dissenting opinion. Where his personal experience has been extensive, in the management of rheumatoid arthritis, his opinions and conclusions deserve consideration. The difficulty of this approach is evident in the section on nonrheumatic disorders where many observers will not agree with all of the opinions expressed by the author. It seems to the reviewer that this section could have been omitted.

Although corticosteroid therapy appears limited to 10 per cent of patients with rheumatoid arthritis, this book is recommended for all rheumatologists and deserves a place on all medical library shelves.

Amos H. Lieberman, M.D.

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MEDICAL JURISPRUDENCE AND TOXICOLOGY—Tenth Edition—John Glaister, J.P., D.Sc., M.D., F.R.S.E., F.R.F.P.S. (Glasg.), of the Inner Temple, Barrister-at-Law, Regius Professor of Forensic Medicine, University of Glasgow; President of the Association in Forensic Medicine in collaboration with Edgar Rentoul, M.B.E., M.A., LL.B., Ch.B., Lecturer in Forensic Medicine, University of Glasgow. The Williams & Wilkins Co., Baltimore, Md. 720 pages, $10.00.

The 1957 (Tenth) edition of "Medical Jurisprudence and Toxicology" (first printing 1902) is essentially a reprint of the recent editions with only minor changes. Those additions specified in the preface deal primarily with new statutes and acts in the English law. These might well serve those who have occasion to take interest in new forensic legislation being contemplated for American law. It would appear that there is much we could learn from the British in this regard.

The book treats the subject of legal medicine quite capably and offers an excellent reference source or method of review of the important elements of the field. More detailed volumes treating specified fields in greater detail should be used by those working in the field, while the beginner or one seeking a quick refresher on some general point would find the volume herein reviewed of some appreciable usefulness.

While well and fully illustrated, the color plates leave much to be desired.

In general, the book would be valuable in any library for reference or elementary training.

PHARMACOLOGY AND THERAPEUTICS—A Textbook for Students and Practitioners of Medicine and Its Allied Professions—Third Edition—Arthur Grollman, Ph.D., M.D., F.A.C.P., Lecturer in Pharmacology and Toxicology, The Medical Branch, and Professor and Chairman of the Department of Experimental Medicine, The Southwestern Medical School, The University of Texas, Attending Physician, Parkland Memorial Hospital; Consultant in Internal Medicine, Baylor University Hospital; Consultant, Veterans Administration Hospital, Dallas, Texas; Civilian Consultant, The Surgeon General U. S. Air Force. Lea and Febiger, Washington Square, Philadelphia, Pa., 1958. 1,034 pages, $12.50.

This third edition by a real teacher, lucid writer, able investigator and sound clinician, is but little changed from the second edition, except for addition of new drugs, better classification by dividing the 44 chapters into 9 groups or parts, and amplifying theoretical sections. There is a new chapter for incorporating the Psychotomimetic and Tranquilizing Drugs, serotonin, lysergic acid diethylamide, the Rauwolfia alkaloids, chlorpromazine, meprobamate and their newer competitors. The book clearly explains drug effects on the basis of the pharmacological actions, as would be expected, but it goes beyond animal pharmacology and explains therapeutic uses from the point of view of both the pharmacologist and the clinician. There is a sufficient number of structural chemical formulas to show relations of the different drugs within a class, and to illustrate dependence of action upon the chemical nature of the drug; there are numerous chymograph tracings, graphs, charts, tables, drawings and photographs to illustrate the text.

Dr. Grollman retains the conventional arrangement of the book, with general statements, definitions, theories and principles in Chapter 1, Part I. The reviewer has maintained for years that such material should either be scattered through a textbook, where specific value or interest would occasion the discussion of the principle or theory, or should be included in a chapter toward the end of the book, so that the reader would have knowledge of specific details from which to induce generalities. This follows the pedagogical rule of going from the concrete to the abstract. Few authors follow this rule.

Another feature of his book is the absence of specific solubility data in the discussion of preparations and doses. Perhaps in this era of finished pharmaceutical preparations, requiring but rare prescribing of extemporaneous solutions, the physician, and hence, the student, has little need for such specific information, but teachers of the older school, of whom few are left in the active teaching field, miss seeing this information in a textbook of pharmacology.

Part II includes 8 chapters on drugs acting primarily on the central nervous system. From the pedagogical point of view it is unfortunate that depressants of the central nervous system are discussed first, for their mechanisms of action are poorly understood and except for recent work on the reticular formation and the arousal mechanism even the site of action within the central nervous system is not known. Thus the student's first contact with drugs is not conducive to clear thinking about site and manner of action. It would have been better to begin with central nervous system stimulants, such as strychnine, pentylenetetrazol and picrotoxin, whose pharmacology is more readily demonstrated, which are not discussed until chapter 8, or better still, with acetylcholine, a peripherally acting drug with easily demonstrable and understood action.

Part III is devoted to peripherally acting drugs, mostly those classified as "autonomic drugs" and as local anesthetics.

Part IV contains five chapters devoted to drugs acting on heart, blood vessels, kidneys, intestine and blood, such as digitalis, nitrites, Rauwolfia, antacids, xanthines, antianemic drugs and anticoagulants. Part V contains the anti-infective or chemotherapeutic agents, in eight chapters. Part VI discusses endocrine products; Part VII the vitamins; Part VIII the minerals, and Part IX vaccines, toxins, immune sera and antitoxins and miscellaneous diagnostic and therapeutic preparations.

Prescription writing is relegated to an appendix, and there is a useful therapeutic classification of drugs, also an appendix. Two valuable portions of the introduction are the brief but scholarly historical account of pharmacology on pages 22 to 24 and statistical considerations on pages 32 to 34.

With actual text material confined to 937 pages of relatively small size and easily read type, there is not too much material for a student to cover in a one-semester course in pharmacology, but there is enough basic pharmacology and indications of therapeutic uses and effects to introduce the student to the subject and to meet most of the needs of the practitioner.

CLINTON H. THIENES, M.D.

* * *

SPINAL ANESTHESIA—John B. Dillòn, B.S., M.S., M.D., Professor of Surgery and Chief of the Division of Anesthesia, Dept. of Surgery, University of California Medical Center, Los Angeles; Consulting Anesthesiologist to the Wadsworth General Hospital, Veterans Adm. Center, Los Angeles, Huntington Memorial Hospital, Pasadena, St. Johns Hospital, Santa Monica, Cedars of Lebanon Hospital, Los Angeles, Los Angeles County Hospital, Los Angeles; formerly Associate Clinical Professor of Surgery (Anesthesia), University of California (Southern) and the College of Medical Evangelists, Los Angeles; Chief of Dept. of Anesthesia, Los Angeles County Hospital. Charles C. Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill. 61 pages, $3.00.

This little 61-page monograph in the American Lecture Series should fulfill one of the author's hopes "that it will be a stimulus to residents in anesthesiology by causing them to look further into many phases of spinal anesthesia about which there is much to learn." On the other hand it may fall short of assisting the anesthetist who has neither the time nor the opportunity to explore some of its facets.

This book, which makes no pretense at being an exhaustive treatise, is in fact an account of the author's viewpoint on spinal anesthesia. For the medical student or new resident in anesthetics it possesses such qualities as brevity and tone of final authority so dear to their hearts.

Chapters on "Indications for Spinal Anesthesia," "Contraindications to Spinal Anesthesia," "Advantages and Disadvantages," "Equipment," "Drugs and Sterilization," afford the reader a clear and concise reflection of the author's assessment.

Many experienced anesthetists will be annoyed to be cautioned "Under no circumstances should a dose of 5 mg. of tetrocaine be exceeded for caesarean section." On the other hand they might question the advisability of adding epenephrine to increase the duration of anesthetic action in 50 per cent of cases.

The reviewer is inclined to believe the author's somewhat inflexibility in some matters along with his tendency to use "Pathology" as a synonym for lesion can be excused inasmuch as it has not interfered with the production of a brief informative text.

Dr. Dillon has drawn upon his wide experience to give something of value to all physicians who are interested in spinal anesthesia.

WILLIAM B. NEFF, M.D.

THEORY AND PROBLEMS OF CHILD DEVELOPMENT—David P. Ausubel, M.D., Ph.D., Bureau of Educational Research, University of Illinois, Grune & Stratton, New York, 1958. 650 pages, $12.00.

This book exhibits a tremendous effort in research. In the 650 pages, the author includes 77 pages of references. The author index accounts for nine pages. The subject matter is well indexed in 29 more pages.

Reading is heavy and laborious for the chapters abound in 50-or-more word sentences and the author delights in filling these sentences with six-syllable words.

The author states that the book is intended as an advanced text for graduate students in psychology and education but might be used for mature undergraduates adequately prepared in psychology. He also intends it as a reference work for pediatricians, clinical psychologists and psychiatrists. Unless the pediatrician were well grounded in the language of the psychologist he would find himself lost in most of the chapters. He would long for brevity and simplicity of expression.

The book is divided into four parts. Part I deals with the general theoretical and methodological issues in child development. Part II considers the origins, raw materials and beginning status of behavior and capacity. Part III deals with the general theory of personality development. Part IV is concerned with special aspects of development which are relatively more peripheral and less ego-related. It would be in Part IV that the pediatrician would find himself more at home.

As the title states the text is largely theoretical. Very few examples are cited to elucidate these theories. The author rejects or criticizes many of the theories as expounded by Freud, Watson, Gesell and others. The lowly reader wonders if the theories expounded are really what makes the child tick.

* * *

REPORT OF THE SCIENTIFIC DIRECTOR—1957—Clarence Cook Little, Sc.D., Chairman, Scientific Advisory Board. Tobacco Industry Research Committee. 150 East 42nd Street, New York 17, N. Y. 49 pages.

This small monograph consists of abstracts of twenty scientific papers dealing with various phases of research directly or indirectly connected with the potential effect of certain noxious agents on normal and abnormal pulmonary, cardiovascular, cutaneous and other tissues.

Dr. C. C. Little, the scientific director of the Tobacco Industry Research Committee, makes the following points as a result of the investigations referred to:

1. Prolonged exposure of the lungs of rodents to massive doses of cigarette smoke has failed to produce bronchogenic cancer.

2. Tobacco smoke condensates have failed to produce cancer, even on the skin of susceptible mice, when applied at a rate and quantity simulating conditions of human smoking.

3. Peripherovascular constriction following nicotine ingestion does not occur routinely; it is found only in certain persons under certain conditions.

4. In one study of the effect of cigarette smoking on gastric secretions of patients with duodenal ulcer, such smoking did not produce significant changes in such secretions.

The Scientific Advisory Board of the Tobacco Research Committee includes distinguished investigators such as Julius H. Comroe, Jr., Leon O. Jacobson, Paul Kotin, Stanley Reimann, and Edwin B. Wilson. It was organized almost five years ago and functions as an independent body in the allocation of grants for research, the amounts appropriated to date being approximately $2,200,000. Primary attention has been given to research projects relating to cancer and heart ailments, but funds have also been allocated to basic and unrelated projects. Investigations are also under way in connection with the sociological and psychological aspects of the kind of people who become excessive smokers.

Progress of medical research is slow and painstaking. The factor of multiple causation in human diseases prevents simple elucidation of many problems. While excessive intake of carbohydrates, fats, ethyl hydrates and tobacco smoke is unquestionably harmful, the precise position of moderate usage of some of these materials is still unsettled.

The report includes a list of grantees and project titles, the former numbering many well known research workers and university professors in this state. The monograph should be of interest to physicians questioned regarding the apparent noxious properties of Lady Nicotine.

L. H. Garland, M.B.

* * *

THE STUDENT LIFE (The Philosophy of Sir William Osler)—Richard E. Verney, M.B., F.R.C.P.E., D.R., Physician in Charge, Department of Student Health, University of Edinburgh, and Nurses Health Service, The Royal Infirmary of Edinburgh. E. & S. Livingstone, Ltd., Edinburgh and London. The Williams & Wilkins Co., Mt. Royal and Guilford Aves., Baltimore 2, Md. 214 pages, $4.00.

Osler's brilliant popular writings, addressed often to medical students or nurses, have been famous for fifty years. Now Dr. Verney gives us for the first time an anthology of this material in the form of excerpts from the various essays grouped together according to subject such as "The Student of Medicine," "The Professor of Medicine," "A Way of Life," et cetera. Osler's philosophy was one of hard, unremitting work, but not necessarily divorced from broad humanitarian subjects. Himself a great bibliophile, he wrote brilliantly with rich allusions to lay and professional literature. He preached and practiced imperturbability, equanimity and courage in adversity; it was his life's tragedy that all these failed him with the death of his son in the first world war.

Every medical student and doctor should own and frequently re-read these works of the master physician of the late 19th century.

Arthur L. Bloomfield, M.D.

* * *

THE MEDICAL WORLD OF THE EIGHTEENTH CENTURY—Lester S. King, M.D., University of Chicago Press, Chicago 37, Illinois, 1958. 346 pages, $5.75.

In this loosely correlated series of essays Dr. King conveys the spirit of 18th century medicine. There is much interesting material here such as the excellent account of Hahnemann (Similia Similibus), the growth of medical ethics, fevers, and many others. Perhaps the author does not make clear as precisely as possible the rather sharp dividing line between the 18th and 19th centuries. The eighteenth was definitely oriented backwards—to Galen. All one need do to convince himself of this is to read discussions about the nature of disease and its treatment written before 1800. With the development of that brilliant school of pathologist-clinicians in Paris, typified by such men as Laennec and Louis, however, the whole outlook changed. The mysticism and empiricism of the past were thrown off like a confining shell and a new attitude of exact inquiry and observation took its place; with this group began modern medicine with remarkable distinctness.

Dr. King's book is instructive and entertaining but should be read more as part of the history of civilization rather than of medicine.

Arthur L. Bloomfield, M.D.

INTEGRATING THE APPROACHES TO MENTAL DISEASE—Two Conferences Held under the Auspices of the Committee on Public Health of the New York Academy of Medicine—Edited by H. D. Kruse, M.D., Executive Secretary, Committee on Public Health, New York Academy of Medicine. Paul B. Hoeber, Inc., 49 East 33rd Street, New York 16, N. Y., 1957. 393 pages, $10.00.

This volume contains the proceedings of two conferences on the subject of the several approaches to the problem of mental disease. Forty-eight experts from several disciplines participated in this work. The general plan was approximately the same for the two conferences.

The conferences were opened with statements on the etiology of mental illness from the organic, the experimental psychological, the psychodynamic and the psychosocial points of view. After this initial presentation of the several points of view the discussion was organized under headings (in the first conference) of areas of interdoctrinal acceptance and areas of interdoctrinal unacceptance. The discussion continued to include items such as evidence of interrelation among doctrines, searching for common ground and a consideration of problems of communication and concepts. Finally, time was devoted to a discussion of steps necessary for further study in connection with the problem of integrating the several approaches.

In reading the introductory papers and the following discussion one gets the impression that the participants were genuinely interested in the attempt to understand each other, but there are many instances in which difficulties were encountered. In some cases this appeared to be the result of wide differences in fundamental points of view. In other cases it appeared to be largely a matter of technical language differences.

There is no question but that this is a laudable attempt, and there is a great deal of evidence to suggest that this type of interdisciplinary effort will be made more frequently in the future. While it is well to keep in mind that these conferences are concerned with several aspects of the mind-body problem, which remains unsolved, and the relationship of the human to the environment, there is reason to believe that studies of this kind will ultimately be of great aid in a better understanding of problems of mental illness.

While this work may be of some interest to the general medical reader it seems more likely that it will be of most value to those who are working directly in the field of mental illness, either in research or clinical positions.

Charles W. Tidd, M.D.

* * *

PRACTICAL PEDIATRICS—R. Cannon Eley, M.D., Assistant Clinical Professor of Pediatrics, Harvard Medical School, and Benjamin Kramer, M.D., Director of Pediatrics Services, Maimonides Hospital, Brooklyn, Clinical Professor of Pediatrics (Emeritus), State University of New York, Medical Center, New York City. Landsberger Medical Books, Inc., distributed by the Blakiston Division of the McGraw-Hill Book Co., New York City. 309 pages, $7.00.

This is well written and is easy to read. It covers most of the more common conditions and illnesses which may affect infants and children. There is enough information presented for each subject discussed to make a diagnosis possible and the outlines of treatment are in keeping with modern and up-to-date concepts.

If the general practitioner would search, read and follow the information presented there would be few failures of diagnosis and he would possess a fair knowledge of physical and pathological conditions that affect children, and have a method of treatment at hand.

Two chapters are given over to the care of the newborn and prematures. In the chapters on feeding more emphasis is given to breast feeding, its value and technique, than to formula feeding. Diets for various age groups are outlined.

The common contagious diseases are discussed with diagnosis, treatment and active immunization procedures. The chapter on diabetes mellitus is so deficient that the general practitioner without much more detailed knowledge than here presented, would not fare well in handling a diabetic child. The chapter on fluid and electrolyte balance gives much necessary information. The authors finish the book with a chapter on poisons and antidotes.

Perhaps the publisher could be criticized for placing eight pages of wholly unrelated x-ray photographs in the midst of the chapter on "Immunization Procedures."

E. Earl Moody, M.D.

* * *

AN ATLAS OF THE COMMONER SKIN DISEASES—**Fifth Edition**—Henry C. G. Semon, M.A., D.M. (Oxon.), F.R.C.P. (London)—Revised with the Collaboration of Harold T. H. Wilson, M.A., M.D. (Cantab.), M.R.C.P., D.T.M. The Williams and Wilkins Company, Baltimore, 1957. 375 pages, with 153 plates reproduced by direct color photography from the living subject, $20.00.

The format of the book is such that on one page a color photograph is presented and on the adjacent facing page is a description pointing out the salient features in the photograph. The usual common skin disorders are represented. Some of the rare skin disorders are presented. Many of the photographs are excellent, but a surprising number are only average.

A small part of the legend describing each skin disorder is devoted to treatment. The book has value for those who desire a complete reference file of books in the field of dermatology. However, for those who like to browse through many pictures, looking for sharp salient features of the various skin disorders, it may prove disappointing.

Harold M. Schneidman, M.D.

* * *

THAT DEGENERATE SPIROCHETE—Oscar Daniel Meyer, M.D. Vantage Press, Inc., 1952.

Oscar Daniel Meyer was born in 1883, and was licensed to practice medicine in 1910. In 1920, he was told by a spiritualist that he would make his living in medicine mainly by administering injections and that a particular patient would appear with a temporal ulcer, which he should diagnose and treat as syphilis. On 24 October, 1925, at one in the morning, he experienced a spiritual manifestation in the form of a disembodied voice which instructed him to "go through with this subject, namely syphilis." A year later, the predicted patient with an ulcer on her temple appeared and he was fully embarked on his career.

This is his book about syphilis and the *Spirochaeta pallida,* to which he infers the cause of everything from acne to xanthoma, not neglecting diabetes, rheumatic fever and hundreds of other disorders. He doesn't say syphilis is the only cause. However, his attitude appears to be that you can never be sure, and a little trial of antisyphilitic therapy will prove the point. His therapy consisted mainly of intravenous mercurochrome at the time the book was published. On his last page, he acknowledges that penicillin is also very good; now, six years later, he must be even more firmly convinced of its value. Since it cures syphilis, and also abates many various disease conditions, he has further evidence that syphilis is the underlying cause of these various syndromes.

His devotion to the prevention of disease is highly praiseworthy, though many would disagree with the fear motivation which he advocates to discourage sexual promiscuity, and more would doubt the dogmas which he offers as facts.

PHYSICAL DYNAMICS OF CHARACTER STRUCTURE—Bodily Form and Movement in Analytic Therapy

—Alexander Lowen, M.D., Executive Director, Institute for Bioenergetic Analysis, New York. Grune and Stratton, New York, 1958. 358 pages, $7.75.

The author states that this book attempts to bridge the gap between psychoanalysis and the concept of a physical approach to emotional disorders. Many of the roots of the material presented may be seen to rest on the contributions of Wilhelm Reich who was the author's teacher. In essence, the book propounds a theory and technique of what the author calls bioenergetic analysis. The book is divided into two parts. Part One represents Dr. Lowen's attempt to show that bioenergetic analysis is a logical extension of psychoanalysis. He does this by means of many references to Freud's works, and interpretations and extensions of these quotations so as to integrate his own techniques into analytic theory. Part Two is divided into nine chapters covering seven types of character structure, with case material to illustrate the author's approach to treatment of such conditions. Some of the conclusions which the author derives from the quotations from Freud are somewhat disturbing in that they appear to take rather large speculative leaps without there being any real indication in the book of the evidence on which such leaps are based. Certainly, few will take issue with the statement that unconscious attitudes are reflected in muscular tensions of one sort and another. However, conclusion that underdeveloped musculature of the lower extremities indicates that the patient has poor contact with the world; or that "the legs are undercharged and contact with the ground is not maintained . . . and, because of this lack of contact with the ground which is the counterpart of the psychological lack of contact with reality, one feels that these individuals are 'in the clouds,' 'floating somewhere up there,' 'out of touch.' " Nor is it very clear to me how the "lack of turgor in the skin (of a young woman patient) pointed to a very undercharged organism." Conclusions of this sort appear to represent too much a reification of concepts and an equivalence between speculative dynamics and physical structure, the basis for which is not clear to me from reading the book. In the chapter on the bioenergetic concept of the instincts, Dr. Lowen attempts to localize various feelings to various parts of the body, indicating that anger is experienced in the back of the body, specifically in the area between the shoulder blades. He reaches the conclusion that there is a swing of energy along the back, upward, in anger or rage, moving over the scalp and into the upper teeth, and that a downward movement along the back occurs in the sexual act. He illustrates these movements by diagrams portraying energy flow over the body by curved lines which he sees to have a meaning relative to character structure and dynamics.

The therapeutic application of these principles consists of attempting to influence the unconscious attitudes of the patient by means of attacks on the muscular results of these attitudes, as they are postulated. Specifically, the author has his patients beat on the couch with their fists. He requests them to go through various kinds of movement. He utilizes the gag reflex, although I was not able to gather from the book the precise ways in which he uses it. At several points in the book he refers to his techniques as analysis while indicating that he sees the patient once a week, during which sessions the patient would talk in a more conventional way as well as go through the various muscular movements indicated.

It is not possible to evaluate very definitely the effectiveness or lack of effectiveness of the author's techniques, merely from a perusal of this book. The physician inexperienced in psychiatry may mistake the author's speculations for scientific fact, and generally accepted psychiatric theory.

Donald Schwartz, M.D.

* * *

THE QUEST FOR IDENTITY—Allen Wheelis, M.D.

The decline of the superego and what is happening to American character as a result. W. W. Norton & Co., Inc., New York, 1958, 250 pages, $3.95.

The Quest for Identity is a thought-provoking book which will be of interest to social scientists and physicians who are introspective and philosophically minded. Although dealing with the complicated problem of social change and the relation of psychoanalysis to it, it is well written and readable.

While problems like loss of personal identity, longing for the past when life was simpler, when standards were clearer, and relationships closer, have an autobiographical flavor, they are common enough in our society and others will be relieved to see a psychoanalyst, who is too often suspected of having all the answers, struggling with them.

The author properly emphasizes the price that is paid for the greater awareness and knowledge, the increase in complexity of life and the accelerated rate of change of our culture. He comments on the changed role which psychoanalysis plays in society. While in its beginning, it revealed social hypocrisies and was a challenge to the prevailing mores, now that it has become a part of society it has become a force for the maintenance of current mores and uniformity.

He feels that "the group has gained in authority at the expense of conscience. Formerly the standard whereby conduct was judged was within the individual. It was taken from the older generation, but the point is that it was *taken.* It was incorporated by the individual in his childhood and thereafter endured within him, beholden to no one, paying no tribute. Now the standard whereby conduct is judged is coming to be located in the group to which the individual adjusts. Specifically this means that the superego has become weaker, more susceptible to influence. The grounds on which it praises and prohibits are open to argument and particularly, to example."

This is normally the case in the process of maturation. Flexibility replaces the rigidity of the childhood conscience when rigidity is no longer required. The yearning for the past with its strict rules and regulations, its better control over impulses, and its dependence, is a yearning for something that never provides real security. But as the author points out "the chains that enslave also guard one from the unknown. The uses of reason have cut away most of our immemorial myths and superstitions, and without them we cringe in the sharp winds of uncertainty. We have fallen victim to our own power to destroy our myths." Reason cannot achieve certainty and uncertainty causes anxiety which psychoanalysis cannot resolve.

Torn by this dilemma, he feels that there still is a net advantage to the method of science.

Norman Q. Brill, M.D.

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If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) no later than September 1, 1958.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association no later than September 1, 1958. (No exhibit shown in 1958, and no individual who had an exhibit at the 1958 session, will be eligible until 1960.)

Medical Motion Pictures

There will be facilities available for motion pictures. If you would like to exhibit a film, send your application to Dr. Paul D. Foster, 1930 Wilshire Boulevard, Los Angeles 57. The deadline is October 15, 1958.

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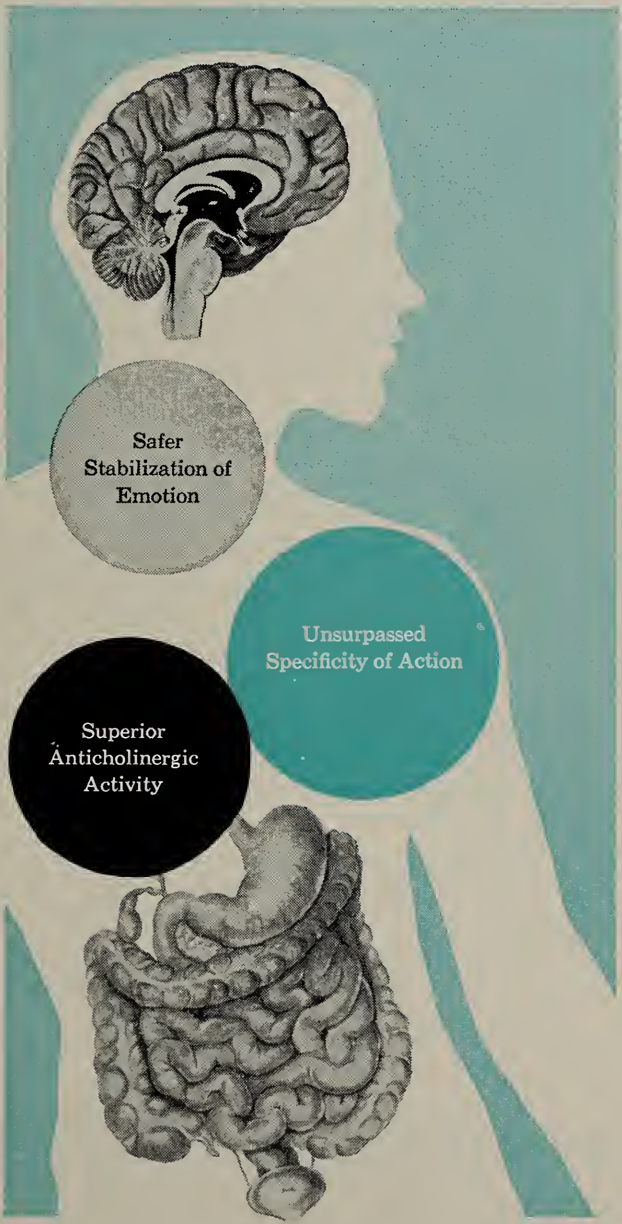
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Treatment for Port-Wine Birthmarks

Treating port-wine birthmarks with an electric needle brought "considerable improvement," an Army physician reports.

Writing in the May issue of *Archives of Dermatology*, published by the American Medical Association, Major Darl E. Vander Ploeg, Madigan Army Hospital, Tacoma, Washington, said he treated four patients with electrodesiccation.

While the improvement in appearance was not 100 per cent, the improvement in the morale of the patients was "remarkable."

Port-wine birthmarks, sometimes called strawberry or raspberry marks, are made up of elevated red growths composed of aggregations of small blood vessels. They occur at birth or shortly after.

Patients with such marks are often told that there is no successful treatment for the condition. It is usually not responsive to x-rays, radium therapy, or cryotherapy.

In electrodesiccation, the tissue is dehydrated by the use of a high frequency current through a pointed needle electrode.

Dr. Vander Ploeg said he treats a small test area initially and then waits six weeks to estimate the degree of expected improvement.

Then other sections are treated.

Mouth-to-Mouth Breathing Resuscitation Described

The mouth-to-mouth breathing technique of artificial respiration advocated for children was discussed in four articles in the May 17 issue of the *Journal of the American Medical Association.*

The technique, which has been adopted for use in children by the American Red Cross, has been found to be equally effective in adults, according to the articles.

Mouth-to-mouth breathing, sometimes called the "Biblical method" is the oldest known resuscitation technique. However, through the years manual techniques have been developed.

Now Dr. Archer S. Gordon and associates, University of Illinois College of Medicine, Chicago, have demonstrated through comparative experiments that the mouth-to-mouth technique is "unequivocally superior" to manual techniques in all age groups. It is the only one which assures that an adequate volume of air will enter the victim's lungs.

The other articles, all published under the auspices of the A.M.A. Council on Medical Physics, are by Dr. James O. Elam, Buffalo, New York, and associates; David B. Dill, Ph.D., Army Chemical Center, Edgewood, Maryland, and Dr. Peter Safar, Baltimore.

The council plans to revise its resuscitation pocket instruction card for artificial resuscitation. It also will issue a statement on the mouth-to-mouth breathing method based on the findings of these research groups.

The authors joined in a statement of principles, which follows:

—Because resuscitation with expired-air inflation is "simple and effective," it is easily learned and adaptable to many resuscitation problems.

—Rescuers can maintain mouth-to-mouth breathing for an hour or more without fatigue even though the victim is twice the size of the rescuer.

—Obstruction of the airway above the larynx is the most common cause of failure of any artificial respiration method. But in expired-air breathing, this type of obstruction is prevented because the hands are free to keep the jaw slightly raised and the mouth open.

—If an obstruction occurs during resuscitation, mouth-to-mouth techniques allow for immediate recognition and removal.

—Because expired-air breathing has been proved of real value, information about the techniques should be distributed "as widely as possible."

Briefly the steps in mouth-to-mouth resuscitation in infants are:

1. Clear the mouth of any foreign matter with the middle finger of one hand. With the same finger hold the tongue forward.

2. Now place the child in a face-down, head-down position and pat him firmly on the back with the free hand. This should help dislodge any foreign object in the air passage.

3. Place the child on his back and use the middle fingers of both hands to lift the lower jaw from beneath and behind so that it "juts out."

4. Hold the jaw in the position described in step 3, using one hand only.

5. Place your mouth over the child's mouth and nose, making a relatively leakproof seal, and breathe into the child with a smooth, steady action, until you observe the chest rise. As you start this action, move your free hand to the child's abdomen, between the navel and the ribs, and apply continuous moderate pressure to prevent the stomach from becoming filled with air.

6. When the lungs have been inflated, remove your lips from the child's mouth and nose and allow the lungs to empty. Repeat this cycle at a rate of about 20 times a minute. After every 20 cycles you should rest long enough to take one deep breath. If at any time you feel resistance to your breathing into the child and the chest does not rise, repeat step 2 and quickly resume mouth-to-mouth breathing.

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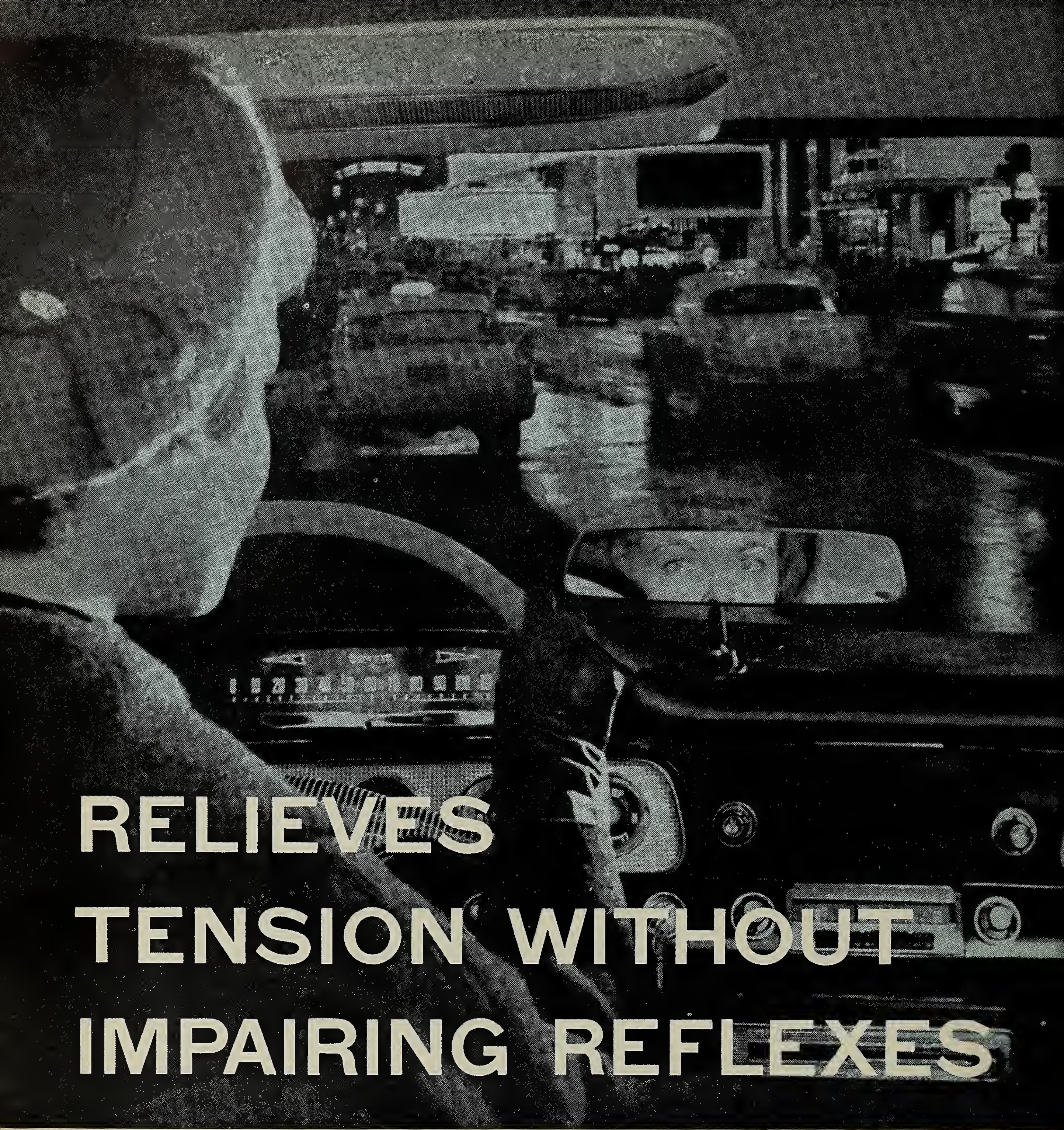

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**Marquis, D. G., Kelly, E. L., Miller, J. G., Gerard, R. W. and Rapoport, A.: Ann. New York Acad. Sc. 67: 701, May 9, 1957.*

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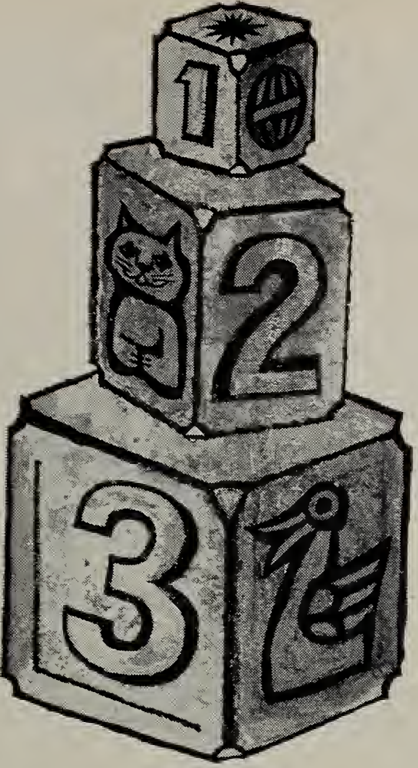

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Vi-Penta No. 1. – vitamins K, E and C, needed especially by prematures and newborns

Each 0.6 cc contains vitamins: K* (analog) – 1 mg; E (dl-α-tocopheryl acetate) – 5 mg; C – 25 mg.
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Vi-Penta No. 2 provides an optimal supply of vitamins A, D, C and E, especially important for normal development

Each 0.6 cc contains vitamins: A (synthetic) – 5000 U.S.P. units; D_2–1000 U.S.P. units; C–50 mg; E (dl-α-tocopheryl acetate) – 2 mg.

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Vi-Penta No. 3 provides A, D, C and 5 B-Complex vitamins to meet the increased nutritional demands of growing years

Each 0.6 cc contains vitamins: A (synthetic) – 5000 U.S.P units; D_2 – 1000 U.S.P. units; B_1 hydrochloride – 1 mg; B_2 (as B_2-5′-phosphate sodium) – 1 mg; B_6 – 1 mg; d-Panthenol (Equiv. to 11.6 mg d-Ca pantothenate) – 10 mg; Niacinamide – 10 mg; C – 50 mg.

For dosage and supply information refer to PDR page 763

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Spinach Overrated As Iron Source

Spinach is no better a source of iron than many other foods.

In fact, potatoes, squash, and carrots contain more iron per portion than does spinach, according to Dr. William Bolton, Chicago.

He discussed spinach in his column, "That's a Good Question," in the May issue of *Today's Health*, an American Medical Association publication. Dr. Bolton is associate editor of the magazine.

He noted that "some years ago spinach received a somewhat exaggerated rating" as an essential food. Now the pendulum has swung the other way.

Spinach contains moderate amounts of vitamin A, as do most green vegetables. It is also "a filling food," with a low calorie content, an important aspect for dieters. When properly cleaned, cooked, and served, it can be a tasty side dish, Dr. Bolton said.

7,000,000 persons have migrated into the state since 1900, while only 2,000,000 have been added by natural increase (births over deaths).

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	Approx. Caloric Value	Composition
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Protein	26.00 calories	6%
Butterfat	90.00 "	10%
Stabilizer (pure)		
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Ascorbic acid ....50.0 mg

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Ascorbic acid ....50.0 mg.

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In each enteric-coated tablet:

Hydrocortisone (alcohol) .... 2.5 mg.
Potassium salicylate .... 0.3 Gm.
Potassium para-aminobenzoate.. 0.3 Gm.
Ascorbic acid ....50.0 mg.

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At last—a nipple
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Rib Nipple
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Scientifically designed to fit baby's mouth—new hollow side ribs provide continuous flow of formula

When to recommend this nipple:

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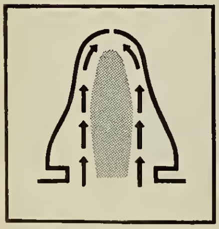

Hollow side ribs make feeding easier because:

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Power Mower Safety Rules

Power mowers are labor-saving tools, but they can be "deadly machines," as shown by a rising accident rate involving operators and bystanders.

Some rules for safe use of power mowers were outlined in the June issue of *Today's Health*, published by the American Medical Association.

Dennis Orphan, associate editor of the magazine, said a two-year Georgia study showed 737 power lawn mower accidents resulting in 794 injuries. Of the injuries, 69.6 per cent were caused by direct contact with the mower, and 30.4 per cent by objects thrown by the mower.

Most power mower accidents are due to carelessness. The most common accident happens when operators attempt to start machines. They ignore safe procedures by starting the machine with one or both feet under the back or side of the machine.

The second most common accident occurs when the operator mows on a hill or incline. He loses his footing and the machine rolls back over his feet.

He also pointed out that a four-cycle engine, turning a 20-inch blade at 3,000 revolutions a minute can pick up a nail or stone and hurl it 170 miles per hour.

Thus power mower owners should develop "a healthy respect" for their machines and learn how to use them correctly.

Some rules, listed by Mr. Orphan, for safe operation of mowers are:

—Clear the yard of all rocks, stones, nails, bones, wires, sticks, and other debris before you start.

—When you start the mower, keep your feet in a safe position away from the blades.

—Know how to disengage the clutch or how to stop the engine quickly in case of emergency.

—Store gasoline in an approved, tightly-sealed container in a safe place, and refuel the engine only when it is cool.

—Never work on the machine when the motor is running.

—Tip the mower by applying pressure on the handles. Never reach underneath and risk losing a finger.

—When mowing on rough terrain, set the blades high to prevent debris from being ejected from the mower.

—Keep your hands, feet, and loose clothing away from any moving part of the machine.

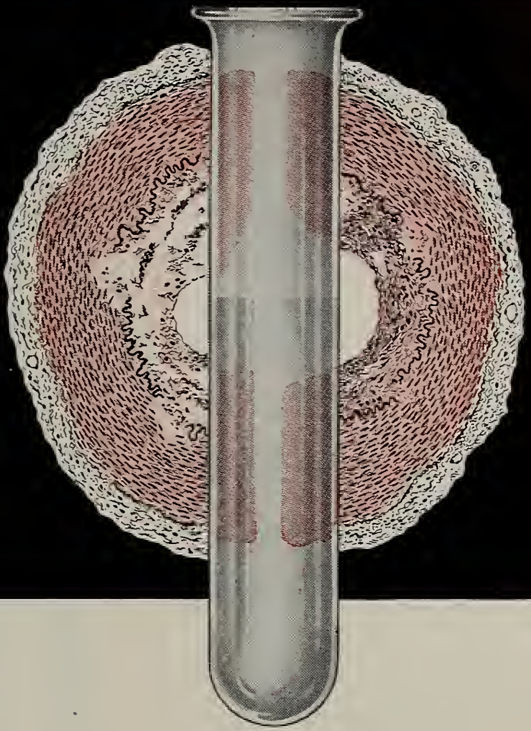
—Make sure the electric mower has a ground wire, and don't use it when it's wet or when it's raining, unless the machine and cord are in perfect condition.

—Don't leave the mower unattended when the motor is running and keep bystanders and pets away from the mowing area.

(Continued on Page 64)

IN DIABETES

Blood Cholesterol Regulation Is Desirable



Frequently, diabetes mellitus is associated with excessive coronary atherosclerosis and heart disease. It is also well recognized that vascular disease manifests itself at an earlier age and progresses more rapidly in the diabetic . . . especially the diabetic female. The early onset and severe degree of atherosclerosis may be due to faulty lipid metabolism, with a concomitant elevation in blood cholesterol levels. Kinsell[1] reports that even in diabetics with extensive vascular disease it is possible to produce normal cholesterol levels with an essential fatty acid emulsion.

The consensus of opinion today is that elevated cholesterol levels should be reduced or prevented. This can be done very well by the addition of adequate amounts of linoleic acid and vitamin B_6 to the diet. In scores of diabetic patients, with extensive vascular disease, diets high in linoleic acid resulted in improvement.[2,3] Vitamin B_6 apparently is necessary to convert linoleic acid into the primary essential fatty acid, arachidonic acid. Thus the body is dependent on an intake of both linoleic acid and vitamin B_6 for normal cholesterol levels.[4,5]

This is why ARCOFAC (Armour Cholesterol Lowering Factor) provides *both* linoleic acid and vitamin B_6 in adequate amounts, thus allowing the patient to eat a balanced, nutritious and palatable diet. Prophylactic dosage is 1-2 tablespoonfuls daily; therapeutic—2-8 tablespoonfuls daily.

Each tablespoonful (15 ml.) of Arcofac emulsion contains:

Essential fatty acids† (measured as linoleic) with 2.5 I.U. of Vitamin E*	6.8 Gm.
Pyridoxine hydrochloride (Vitamin B_6)	1.0 mg.

†Supplied by safflower oil which contains the highest concentration of polyunsaturated fatty acids of any commercially available vegetable oil.

*Added as Mixed Tocopherols Concentrate, N.F.

References 1-5 supplied on request.

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USSR Medical Literature

National Library of Medicine is scheduled to publish soon a comprehensive guide to Russian medical books and periodicals. Listings will be included of works by Russian and English language publishers, titles of journals and sundry information. NLM also is cooperating in preparation of an English-Russian, Russian-English medical dictionary which is due to be published in a month or so.

—*Washington Report*

Power Mower Safety Rules

(Continued from Page 58)

—Don't let the mower pull you. To maintain control, slow it down. Never run or trot.

—Don't cut up and down on hills. If you slip, the machine may slide over your toes. Cut sideways.

—Never remove anything from the mower until you are certain the blades have stopped.

—Don't increase the speed by tampering with the governor. Excessive cutting blade speed is dangerous.

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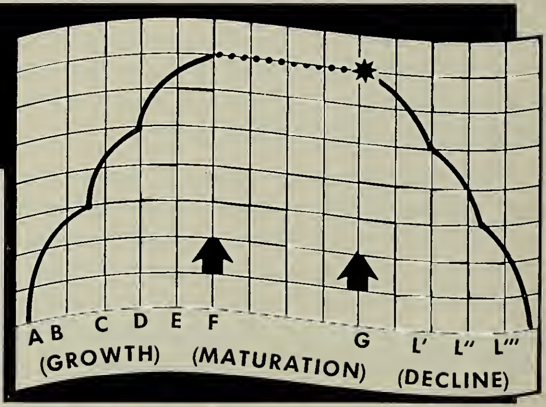
Properly balanced Androgen — Estrogen — nutritional therapy may prevent premature aging and damage of gonadal decline and nutritional inadequacy.

Complaints of symptoms such as muscular pain, fatigue, irritability, and poor appetite in the patient over 40 may be the first indications of three major stress factors in the aging process: (1) Gonadal Hormonal Imbalance, (2) Nutritional Inadequacy and (3) Emotional Instability. GERITAG is especially formulated to guard against premature damage and to delay the degenerative process.

Rx GERITAG in preventive geriatrics.

*Chappel, C.C., J.A.M.A., 162: 1414, (Dec. 8) 1956

Write for Latest Technical Bulletins.



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Methyltestosterone	2 mg.	Thiamine Hcl.	2 mg.
Ethinyl Estradiol	0.01 mg.	Ribaflavin	2 mg.
Ferrous Sulfate	50 mg.	Pyridoxine Hcl.	0.3 mg.
Rutin	10 mg.	Niacinamide	20 mg.
Ascorbic Acid	30 mg.	Manganese	1 mg.
B-12	1 mcg.	Magnesium	5 mg.
Molybdenum	0.5 mg.	Iadine	0.15 mg.
Cobalt	0.1 mg.	Patassium	2 mg.
Copper	0.2 mg.	Zinc	1 mg.
Vitamin A	5,000 I.U.	Chaline Bitartrate	40 mg.
Vitamin D	400 I.U.	Methionine	20 mg.
Vitamin E	1 I.U.	Inasital	20 mg.
Cal. Pantathenate	3 mg.		

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continuous-acting tablets . . . for continuous relief

EACH LP TABLET CONTAINS:

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Chlorprophenpyridamine maleate .	4 mg.	*bottles of 50 tablets.*

For day-long or night-long relief, 1 dose of 2 tablets (1 tablet for mild cases and children). †Trademark

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BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE *are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.*

ANOMALIES OF INFANTS AND CHILDREN—D. McCullagh Mayer, D.D.S., M.D., F.A.C.S., F.I.C.S., Associate Professor of Plastic Surgery, New York Medical College, and Wilson A. Swanker, M.D., F.A.C.S., F.I.C.S., Professor of Plastic and Aesthetic Surgery, Ankara University, Turkey. McGraw-Hill Book Company, Inc., The Blakiston Division, New York, 1958. 454 pages, $12.00.

AUSCULTATION OF THE HEART—Abe Ravin, M.D., Associate Clinical Professor of Medicine, University of Colorado School of Medicine. The Year Book Publishers, 200 East Illinois Street, Chicago 11, Ill., 1958. 166 pages, $6.00. (Also chart useful in diagnoses, as used by author in his practice. Chart in pads of 50, $1.00.)

CANCER AND THE ATOMIC AGE—Clement A. Tavares, M.D. Vantage Press, Inc., 120 W. 31st St., New York 58. 198 pages, $3.50.

CARDIOVASCULAR DISEASES — Third Edition — Revised and Enlarged—David Scherf, M.D., F.A.C.P., Professor of Clinical Medicine, New York Medical College, and Linn J. Boyd, M. D., F.A.C.P., Professor and Director of Medicine, New York Medical College. Grune & Stratton, Inc., 381 Fourth Ave., New York, 1958. 829 pages, $17.75.

CLINICAL ENZYMOLOGY—Gustav J. Martin, Sc.D., Research Director, The National Drug Company, Philadelphia, 1958. Little, Brown & Company, Medical Book Department, Boston 6, Mass. 241 pages, $6.00.

CORRELATIVE NEUROANATOMY AND FUNCTIONAL NEUROLOGY—Ninth Edition — Joseph G. Chusid, M.D., Attending Neurologist, St. Vincent's Hospital, New York, and Joseph J. McDonald, M.S., M.Sc.D., M.D., Dean of Medical Faculty, American University of Beirut, Lebanon. Illustrated by Ralph Sweet. Lange Medical Publications, P. O. Box 1215, Los Altos, California, 1958. 345 pages, $4.50.

COUNTERFEIT SEX—Homosexuality, Impotence, Frigidity—Second, Enlarged Edition—Edmund Bergler, M.D. Grune & Stratton, 381 Fourth Ave., New York 16, N.Y., 1958. 380 pages, $6.50.

DIAGNOSTIC MEDICAL PARASITOLOGY—Edward K. Markell, Ph.D., M.D., Assistant Professor of Infectious Diseases, Div. of Parasitology and Tropic Diseases, School of Medicine, University of California, Los Angeles; and Marietta Voge, M.A., Ph.D., Assistant Professor of Infectious Diseases, Div. of Parasitology and Tropic Diseases, School of Medicine, University of California, Los Angeles. W. B. Saunders Company, W. Washington Square, Philadelphia 5, Pa., 1958. 276 pages, with 115 figures, including five in color, $7.00.

DIETARY PREVENTION AND TREATMENT OF HEART DISEASE—John W. Gofman, Ph.D., M.D., Donner Laboratory, University of California, Berkeley; Alex V. Nichols, Ph.D., Donner Laboratory, University of California, Berkeley; E. Virginia Dobbin, Senior Dietitian, E. V. Cowell Memorial Hospital, University of California, Berkeley. C. P. Putnam's Sons, 210 Madison Ave., New York 16, N. Y., 1958. 256 pages, $3.95.

DISEASES OF THE THYROID AND PARATHYROID GLANDS—Bernard J. Ficarra, A.B., Sc.B., M.D., D.S., Research Associate in Biology (Thyroid Physiology), Post-Graduate School, Long Island University. International Medical Book Corporation, New York, 1958. 295 pages, $8.50.

DRUGS OF CHOICE—1958-1959—Edited by Walter Modell, M.D., Associate Professor of Pharmacology, Cornell University Medical College. C. V. Mosby Company, St. Louis, Mo., 1958. 931 pages, $12.75.

DYNAMIC ANATOMY AND PHYSIOLOGY—L. L. Langley, Ph.D., LL.B., Associate Professor Physiology, University of Alabama Medical Center; E. Cheraskin, M.D., D.M.D., Professor of Oral Medicine, University of Alabama Medical Center; Ruth Sleeper, R.N., Director of the School of Nursing, Massachusetts General Hospital. McGraw-Hill Book Company, Inc., The Blakiston Division, 330 West 42nd Street, New York 36, N. Y., 1958. 719 pages, $6.00.

FUNCTIONAL BRACING OF THE UPPER EXTREMITIES—Miles H. Anderson, Ed.D., Director, Prosthetics Education Project, School of Medicine, University of California, Los Angeles. Edited by Raymond E. Sollars. Charles C. Thomas, Publisher, 301-327 East Lawrence Ave., Springfield, Ill., 1958. 463 pages, $9.50.

HEALTH YEARBOOK, 1957—Compiled by Oliver E. Byrd, Ed. D., M.D., F.A.P.H.A., Professor of Health Education, Stanford University. Stanford University Press, Stanford, California, 1958. 278 pages, $5.50.

HISTORY OF PUBLIC HEALTH, A—MD Monographs on Medical History, Number One—George Rosen, M.D., Ph.D., M.P.H., Professor of Health Education, School of Public Health and Administrative Medicine, Columbia University. MD Publications, Inc., 30 East 60th St., New York 22, N. Y., 1958. 551 pages, $5.75.

HOW TO LIVE WITH DIABETES—Henry Dolger, M.D., Chief, Diabetes Clinic, Mt. Sinai Hospital, New York, and Bernard Seeman. W. W. Norton & Company, Inc., New York, 1958. 192 pages, $3.50.

LOVE, SKILL AND MYSTERY—A handbook to marriage—Theodor Bovet. Doubleday & Company, Inc., Garden City, N. Y., 1958. 188 pages, $3.50.

MANUAL FOR THE APHASIA PATIENT—Mary Coates Longerich, Ph.D., College of Medical Evangelists, School of Medicine, Los Angeles, California. Foreword by J. M. Nielsen, M.D. The Macmillan Company, New York, 1958. 277 pages, $4.75.

MANUAL OF MEDICAL EMERGENCIES—Third Edition—Stuart C. Cullen, M.D., Professor of Surgery; Chairman, Division of Anesthesiology, State University of Iowa College of Medicine, and E. G. Gross, M.D., Professor and Head of Department of Pharmacology, State University of Iowa College of Medicine. The Year Book Publishers, Inc., Chicago, Ill., 1958. 302 pages, $5.75.

MENTAL HEALTH IN INDUSTRY—Alan A. McLean, M.D., Psychiatric Consultant, International Business Machines Corporation; and Graham C. Taylor, M.D., Allan Memorial Institute of Psychiatry, McGill. McGraw-Hill Book Company, Inc., The Blakiston Division, New York, 1958. 262 pages, $6.50.

MEMOIRS OF A G.P.—Otis Marshall, M.D. Vantage Press, Inc., 120 W. 31st Street, New York, 1958. 155 pages, $3.50.

MODERN TREATMENT YEARBOOK 1958—A Yearbook of Diagnosis and Treatment for the General Practitioner—Edited by Sir Cecil Wakeley, Bt., K.B.E., C.B., LL.D., M.Ch., D.Sc., F.R.C.S., F.R.S.E. Published for The Medical Press by Bailliere, Tindall & Cox., Ltd., London, 1958. U. S. Distributor: The Williams and Wilkins Company, Baltimore, 1958. 312 pages, $6.75.

OCULAR ALLERGY—Frederick H. Theodore, M.D., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Abraham Schlossman, M.D., Clinical Assistant Professor of Ophthalmology, College of Medicine, State University of New York. With chapters by William B. Sherman, M.D., and Robert S. Coles, M.D. The Williams & Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2, Md., 1958. 420 pages, $12.00.

OPHTHALMIC PLASTIC SURGERY—Second Revised Edition—Sidney A. Fox, M.S. (Ophth.) M.D., F.A.C.S., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Chief, Eye Service, Bronx Veterans Administration Hospital, Goldwater Memorial Hospital, and Hospital for Joint Diseases. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1958. 324 pages, $15.00.

POLYMYOSITIS—John N. Walton, M.D., M.R.C.P., First Assistant in Neurology, King's College, University of Durham, in the Royal Victoria Infirmary, Newcastle upon Tyne, and Raymond D. Adams, M.D., Bullard Professor of Neuropathology, Harvard University and Chief of the Neurological Service, Massachusetts General Hospital, Boston, Mass. Williams & Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2, Md., exclusive U. S. agents, 1958. 270 pages, $7.00.

(Continued on Page 74)

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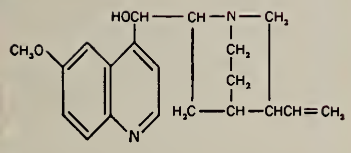

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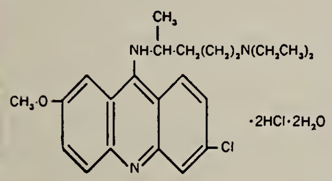

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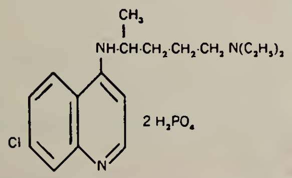
ARALEN® PHOSPHATE



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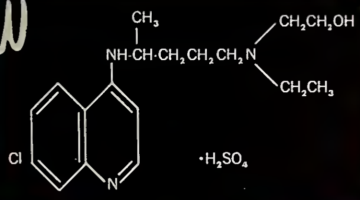

CH₃
CH₂CH₂OH
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SUPPLIED: Tablets of 200 mg., bottles of 100.

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EFERENCES:
Scherbel, A.L., Schuchter, S.L., and Harrison, J.W.: *Cleveland Clin. Quart.* 24:98, Apr., 1957.
Schoch, A.G., and Alexander, L.J.: The Schoch section, *Bull. A. Mil. Dermatologists* 5:25, Nov., 1956.
Cornbleet, Theodore: Arch. Dermat. 73:572, June, 1956.

Atabrine (brand of quinacrine), Aralen (brand of chloroquine) and Plaquenil (brand of hydroxychloroquine), trademarks reg. U.S. Pat. Off.

Harvard Lettermen Studied For Heart Disease

The value of exercise in preventing heart disease has again been shown in a new study of former Harvard College football players.

The study, made by Dr. William C. Pomeroy, Los Angeles, and Dr. Paul Dudley White, Boston, was reported in the June 7 issue of the *Journal of the American Medical Association.*

An attempt was made to follow up 424 Harvard students who won their football letters in the years 1901-1930. Of these, in 1955, 126 were known to have died and 292 to be alive, while six could not be traced.

The cause of death was known for 87 of the 126. Among these, coronary heart disease was responsible for 25 deaths, or 29 per cent. Cerebral hemorrhage, generalized arteriosclerosis, and congestive heart failure accounted for eight more deaths, making the total 33 cardiovascular deaths, or 38 per cent, the doctors said.

Cancer apparently caused 11 deaths; pneumonia and war injuries, nine each; accidents, eight; suicide, four, and miscellaneous, the rest.

These football players who showed coronary heart disease were compared to others without the disease for body build, weight gain, personal family status, family history, habits of exercise, use of alcohol and tobacco, and diet.

"One of the most significant findings in the study was the apparent protection afforded by the continuation of a program of heavy exercise," the doctors said.

"Those who maintained even moderate habits of exercise were less prone to coronary heart disease, and no individual in this study who maintained a heavy exercise program happened to develop coronary heart disease," they said.

The study also showed the following:

—Body build did not differ significantly between the two groups, but there was more weight gain in the coronary group than in the others.

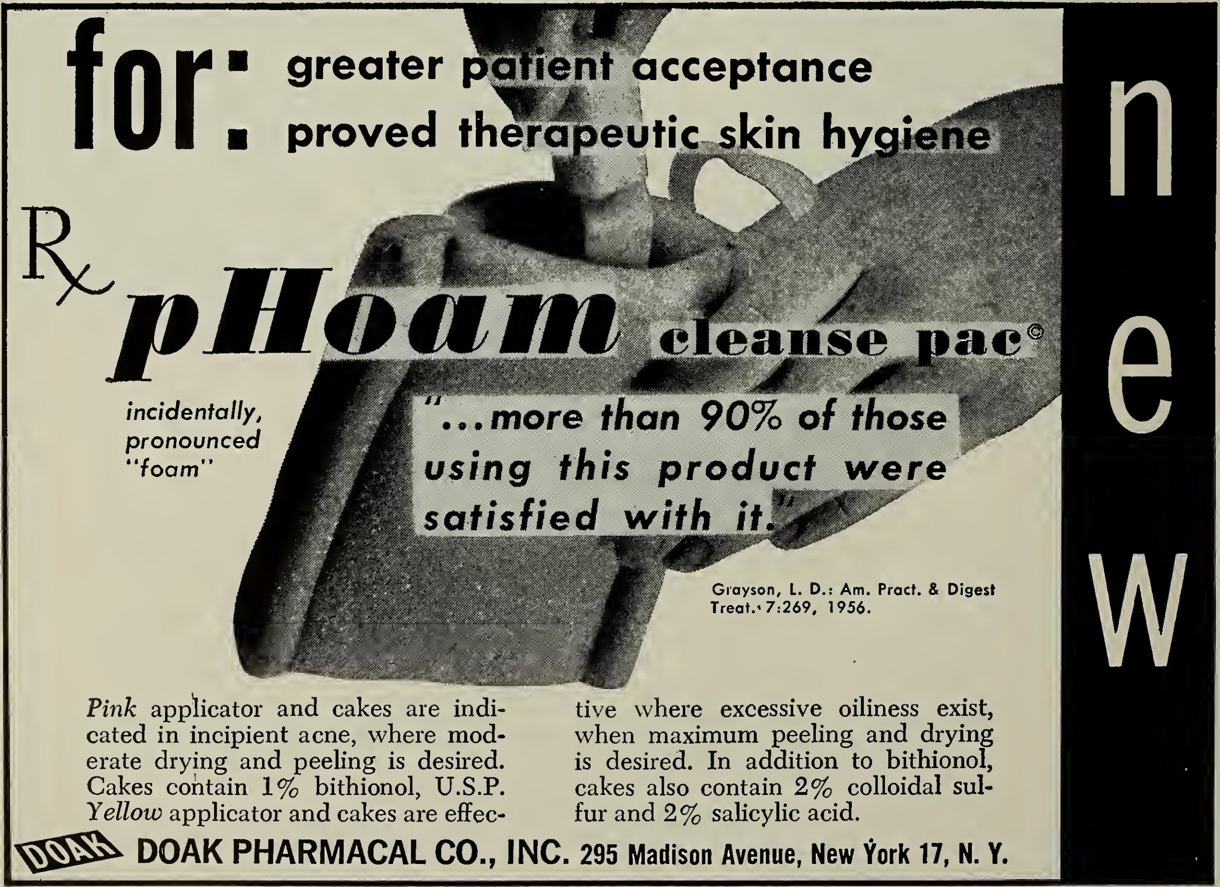
—There were more divorces in the coronary group. This "may or may not" represent a factor of stress.

—There was a higher percentage of family history of coronary heart disease in the coronary group than in the control group.

—Smoking and drinking appeared to play no part in the development of heart disease, and the lack of details about dietary habits precluded any conclusions in this area.

Seventy-five percent of the state's population is concentrated in and around San Francisco, Los Angeles, and San Diego.

—Health in California



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Grayson, L. D.: Am. Pract. & Digest Treat. 7:269, 1956.

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Caution Is Advised in Use of Preoperative Narcotics

Two Pennsylvania physicians have called for a more objective approach in the use of narcotics for sedation before surgery.

Writing in the May 24 issue of the *Journal of the American Medical Association*, Drs. James E. Eckenhoff and Martin Helrich, both of Philadelphia, said "Preoperative medication should be tailored to meet the needs of the patient and his operation."

Their study was undertaken to compare the effectiveness of three commonly used narcotics—morphine, meperidine, and alphaprodine—with that of secobarbital, and a saline solution.

Results of the study on 1,400 surgical patients indicate that narcotics should be used as preoperative sedatives only "with a specific objective in mind and with an awareness of the hazards inherent in their use."

Preoperative medication is intended to reduce fear and apprehension and produce a relaxed and tranquil patient. It is also important that the drugs involved leave the patient with a minimum of side-effects.

(Continued on Page 84)

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[1] Thomas, J. W.: Ann. Allergy *16*:128, 1958

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Medicare Ruling on Drugs for Maternity Cases

The Office for Dependents Medical Care has cancelled a regulation that permitted physicians to add to their statements the cost of drug items directly or indirectly furnished maternity patients. ODMC said the majority of state medical societies considered the policy objectionable, as did pharmacists. In addition, only a small percentage of dependents getting maternity care from civilian sources have benefited from this policy.

Physicians, after July 1, may continue to include the cost of drugs which they administer parenterally, provided such drugs are necessary and directly related to the condition for which authorized care and treatment are furnished. The doctor must also identify the nomenclature and quantity of the drug and set forth the cost to him on the claim form or attachment.

—*Washington Letter*

Caution Is Advised in Use of Preoperative Narcotics

(Continued from Page 84)

respiratory obstruction, the physicians felt that postoperative narcotic sleep is not an advantage. This is particularly true in the absence of recovery rooms or where nursing personnel is at a premium.

The physicians felt that with the anesthetic agents and techniques available today, "each patient must be considered individually and each anesthetic and operation must be viewed objectively."

This gives importance to the preoperative visit between the patient and the anesthetist can do more to relieve fear and tension "than amounts of narcotics or barbiturates, and it is far safer for the patient."

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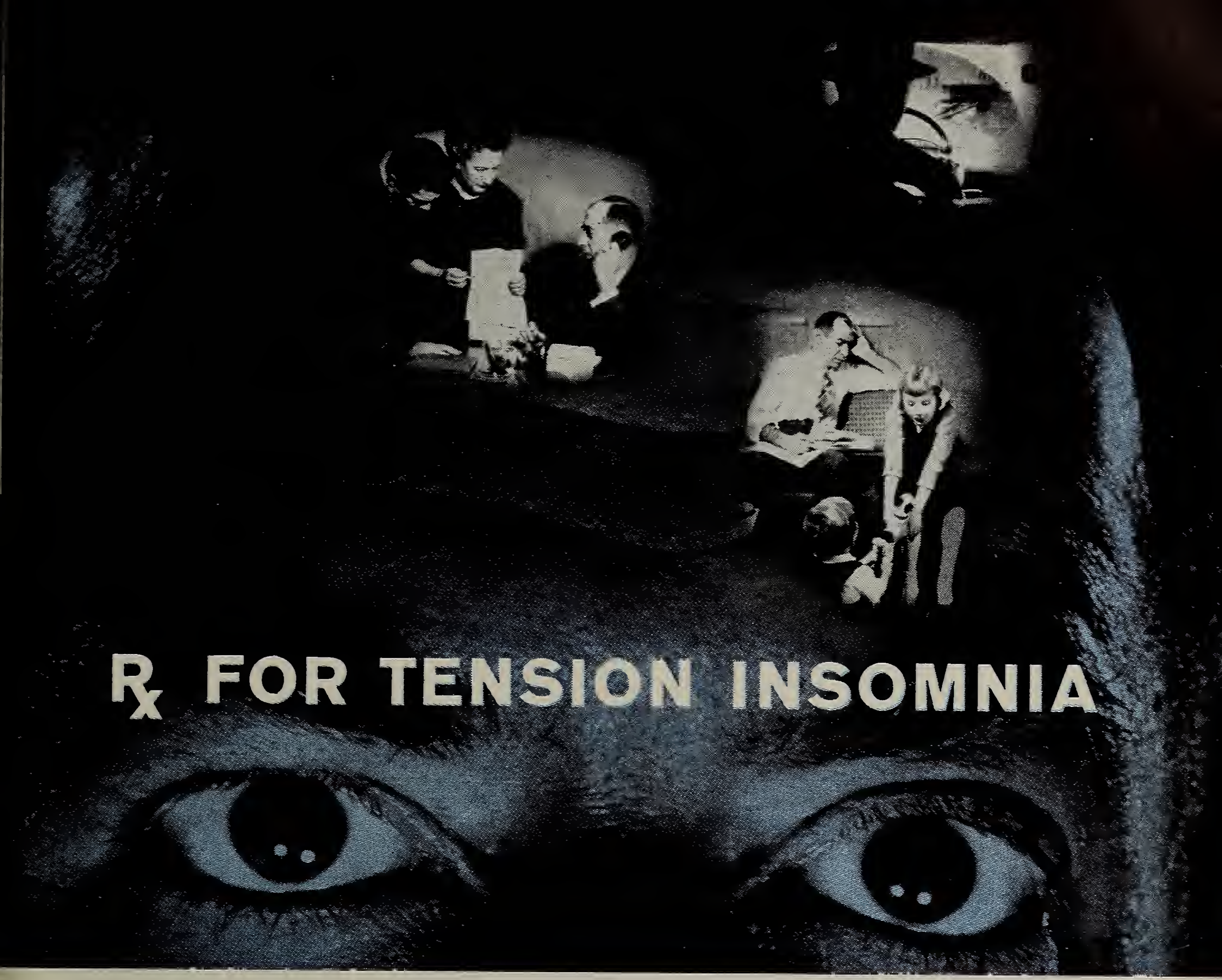

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License Over 7,000 New Physicians in United States

For the fifth consecutive year more than 7,000 new physicians entered the practice of medicine in the United States during 1957.

This was revealed in the 56th annual report of the American Medical Association's Council on Medical Education and Hospitals which appeared in the May 31 issue of the *Journal of the American Medical Association.*

Of the 7,455 new doctors licensed to practice, 5,872 licenses were given as a result of written examination and 1,583 by interstate reciprocity or endorsement of credentials.

During the same period, 3,500 physician deaths were reported, which reduces the over-all gain in the doctor population to 3,955.

In all, state and territorial boards issued 15,090 licenses during the year but 7,635 went to physicians already holding licenses from another state or to men who took examinations in more than one state.

The total number of licenses issued, both by written examination and reciprocity or endorsement of credentials, represent an increase of 547 over 1956.

In issuing 2,167 licenses, California led all other states. New York was second with 1,355, while Ohio and Pennsylvania were next with 831 and 744 licenses respectively. Florida, Illinois, Maryland, and Texas each had in excess of 500. Nevada, with 15, licensed the fewest number of physicians.

During the year there were 9,116 applicants for licensure by written examination. Of these, 7,769 passed and 1,347 failed.

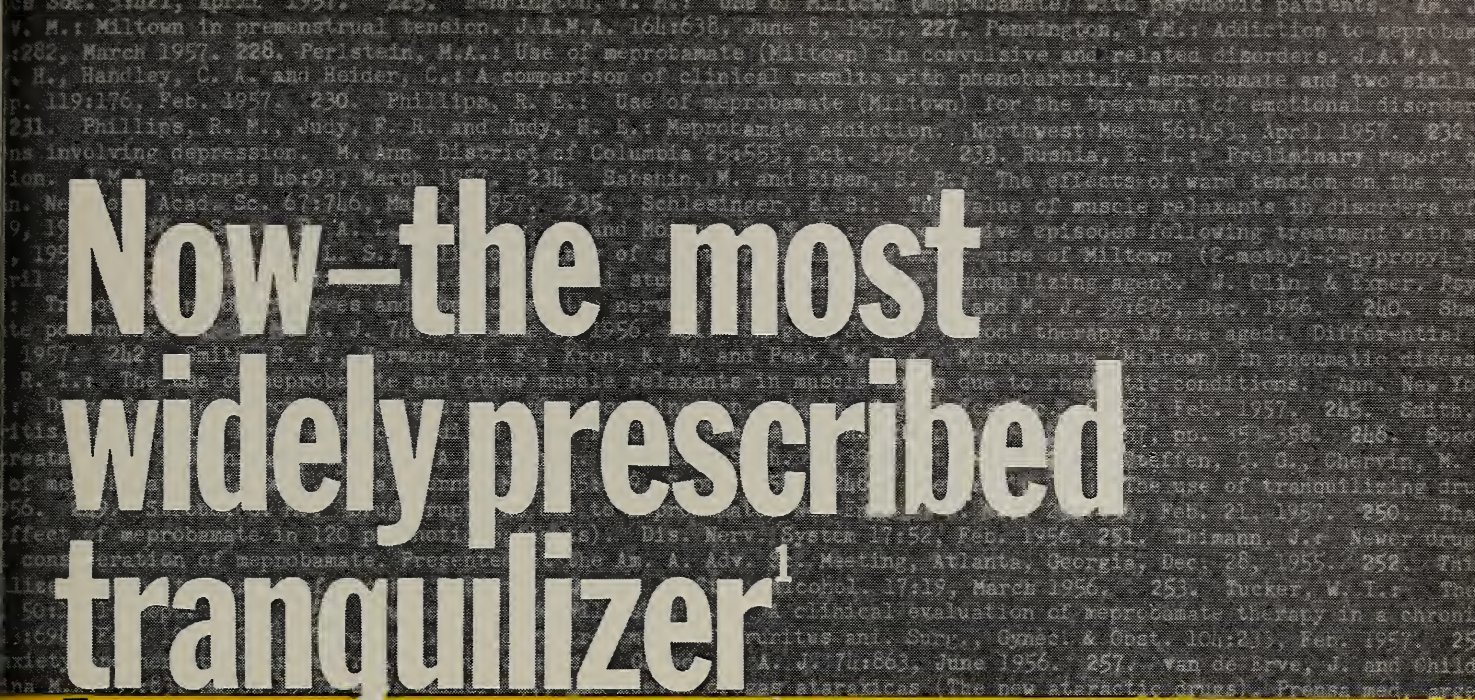
Included among those who took the examination were: 6,244 graduates of approved medical schools in the United States; 185 from approved schools in Canada; four graduates of approved schools in the United States which are no longer in operation; 2,299 from foreign medical faculties; 42 graduates of unapproved medical schools in the United States no longer in existence, and 342 graduates of schools of osteopathy.

Three medical schools had graduates for the first time during the period. They were the University of Missouri, University of Saskatchewan, and the University of Mississippi. All of the graduates of the Mississippi school passed their written examinations.

Six other schools also had no failures among their graduates. They are Stanford University, University of California at Los Angeles and San Francisco, Yale University, Albany Medical College, and the University of Utah.

The graduates of foreign faculties of medicine include both American and foreign born and the

(Continued on Page 16)



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[1] Meprobamate is more widely prescribed than any other tranquilizer. Source: Independent research organization; name on request.

[2] Baird, H. W., III: A comparison of Meprospan (sustained action meprobamate capsule) with other tranquilizing and relaxing agents in children. Submitted for publication, 1958.

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Birth Rate Slow-Down Caused by Recession

It appears that the current business recession is teaming up with the depression of the 1930s to force a slow-down in our booming birth rate.

The two slumps are partly to blame for the present decline in the number of marriages and births, according to an editorial in the June 21 issue of the *Journal of the American Medical Association.*

The editorial said, "These two declines suggest but do not prove that the end of the baby boom is in sight."

"Because of the comparatively small number of births during the 1930s, the number of youths attaining marriageable age continues to be fewer than can be expected during the 1960s."

While the number of births still exceeds 300,000 a month, the first quarter of 1958 saw a reduction of 7,000 births over a similar period a year ago.

This decline, according to the editorial, "is due in some measure to the business recession."

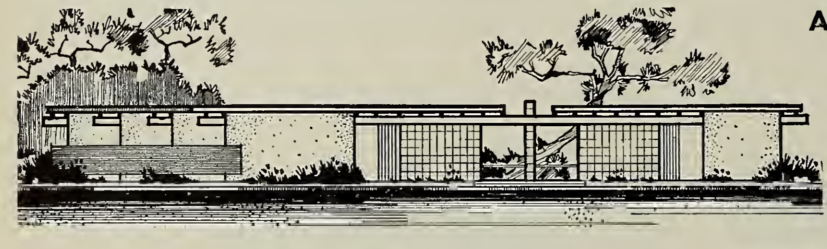
This may only be an interval in an irregular rise in births and marriages, it said, but it "should make one hesitate about predicting a population explosion in the United States."

License Over 7,000 New Physicians in United States

(Continued from Page 14)

1,345 who passed the examination represents an increase of 333 successful candidates over 1956.

The number of licenses issued on the basis of geographical areas were: New England, 459; Middle Atlantic, 1,718; East North Central, 1,466; West North Central, 708; South Atlantic, 1,262; East South Central, 480; West South Central, 751; Mountain, 147; Pacific, 380, and territories and possessions, 104.



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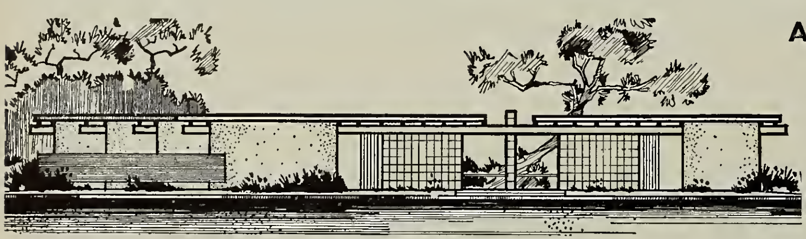

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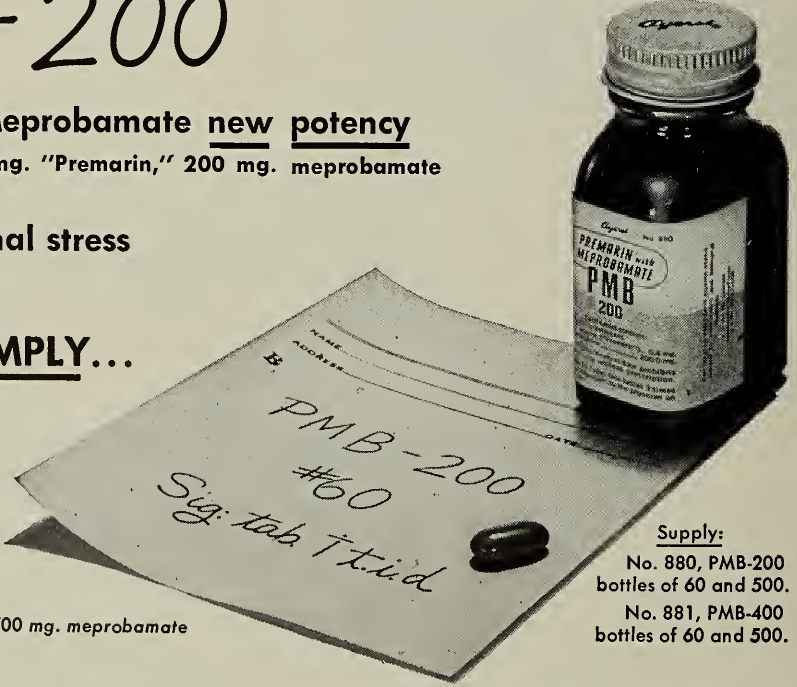

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Salk Vaccine Does Not Cause Brain Damage

Suspicions that Salk polio vaccinations might cause damage to the brain or central nervous system are unfounded. This observation was made following an extended clinical study of 852 persons in all age groups who received three inoculations with the vaccine.

The study was prompted by reports which were circulated during the 1956 mass inoculation program to the effect that children were developing convulsions and other signs of central nervous system disorders after being vaccinated.

Mrs. Erna L. Gibbs and Dr. Frederic A. Gibbs termed the outcome of the study "astonishing." "We had not expected to obtain such completely negative results with a biologically potent material."

Writing in the June 21 issue of the *Journal of the American Medical Association*, they said it was their intention to determine if a mass immunization program against poliomyelitis could cause brain disorders in some persons.

Sudden, unexplained illnesses, some of which defy the most expert diagnosticians, are common in many children.

"By coincidence," they said, "an unexplained illness could follow a Salk vaccination at just the right time to convince the family and even the physician in charge that the vaccination was responsible for the child's illness or even his death."

If the brain suffered abnormalities as a result of a Salk inoculation, it would be indicated by the presence of encephalitis, an inflammation of the brain. This condition occurs on extremely rare occasions following vaccination against disorders such as whooping cough, rabies, diphtheria, and tetanus.

Encephalitis is detected by means of an electroencephalograph, which measures electrical activity

(Continued on Page 26)

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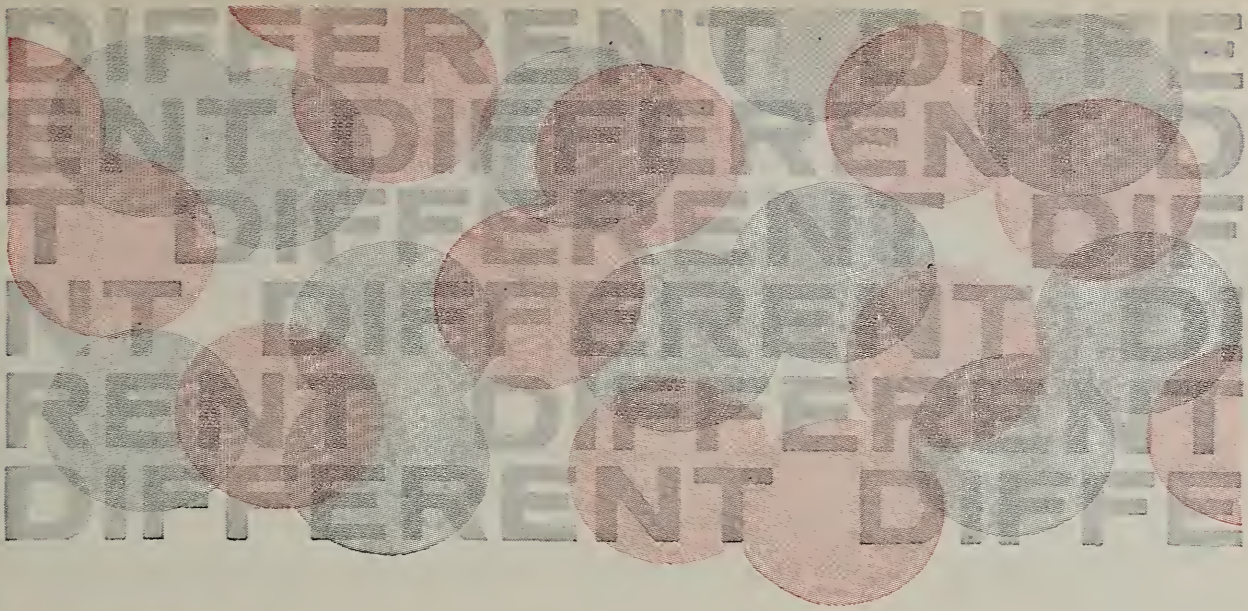

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Salk Vaccine Does Not Cause Brain Damage

(Continued from Page 22)

within the brain. A slowing of the waves would indicate a reaction and probable presence of the condition.

In the study, electroencephalographic tests were given to each of the 852 patients before and after the three Salk inoculations.

Since no abnormalities were uncovered, the researchers concluded that "Salk vaccine is unlikely to cause an encephalitic type of reaction or brain injury."

The test, according to the authors, also showed that epileptics and persons with prior brain damage can be safely given the vaccine. One hundred and six such persons were inoculated without incident.

The study was carried out in three centers—Chicago, Rockford, Illinois, and Richmond, Virginia—in order that local conditions might not affect the results.

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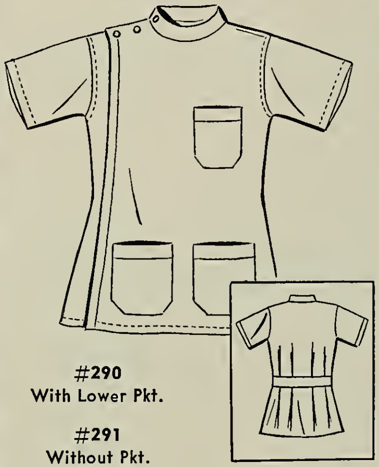

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IRS Rulings of Interest to the Profession

The Internal Revenue Service has ruled that physicians on a full-time staff basis with hospitals do not have to include in their gross income those checks they receive from patients and which are immediately endorsed over to the hospital. Comments IRS: "He is an agent for the hospital, merely acting as a conduit for the fees collected." Physicians are expected, however, to list when filing their returns, the sources of the fees, the amounts received and disposition made. In another ruling, IRS holds that expenses paid for special aids to assist in the education of a child progressively becoming blind are deductible as expenses paid for medical care. Listed were such things as tape recorder, special typewriter, projection lamp for enlargements and special lenses.

—*Washington Letter*

Perils of twins are pointed up in an Iowa study by M. Donnelly who found that fetal deaths among them were nearly three times as high, neonatal deaths six times as high, as for single births.

—*Family Life*, October, 1957.

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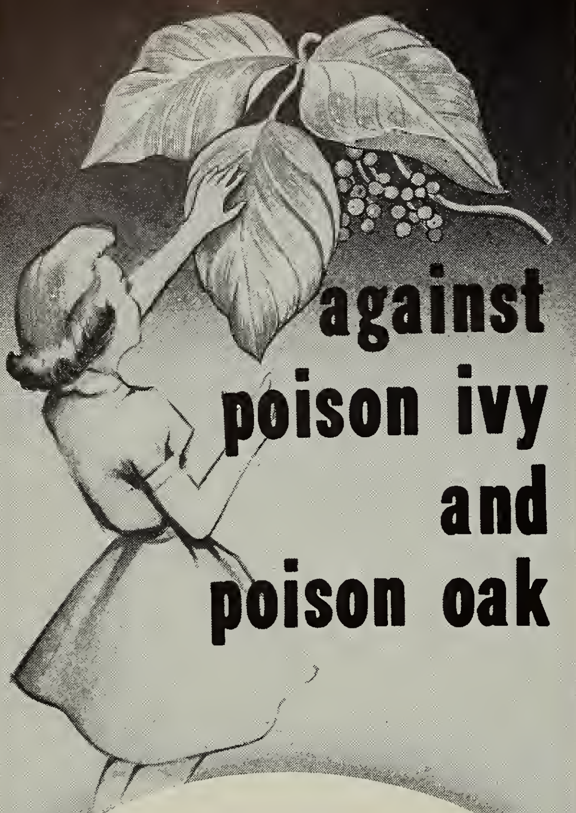

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Literature Available—Please Write Dept. C

Diabetic Drug Found to Have Limited Effectiveness

A 20-month study has given further evidence that only a limited group of diabetics can be effectively treated with the oral drug tolbutamide (Orinase).

This was revealed by Drs. Hellmut Mehnert, Rafael Camerini-Davalos, and Alexander Marble, Boston, in a report appearing in the June 14 issue of the *Journal of the American Medical Association.*

Commenting on the study the physicians stated "the drug works best in middle-aged and elderly diabetics who otherwise would take relatively small doses of insulin."

Chief advantage in using the drug is convenience. "It is particularly welcome to blind patients, to those with disabilities or tremor of the hands, and to those who are highly nervous."

The study substantiates a warning published a year ago in the A.M.A. *Journal* which said "tolbutamide is not a substitute for insulin and could be used in only certain types of diabetic patients."

The Boston study was performed at the Joslin Clinic and New England Deaconess Hospital. Favorable results occurred in cases of maturity-onset type diabetes and where patients had low insulin requirements.

In all, 1,030 diabetic patients were given tolbutamide. However, 228 were immediately eliminated from the study because they required insulin to control diabetes or could control it with proper diet.

The remaining 772 patients were described by the doctors as being "composed almost entirely of middle-aged persons with maturity-onset type diabetes and with prior daily insulin dosage usually of 20 units or less."

These patients were given the drug daily for a period of one to 20 months. "Good control of blood and urine sugar levels was obtained in 407 patients and fair control in 143," the doctors said.

It was pointed out that "the standards arbitrarily chosen for 'good' and 'fair' control are relatively strict as compared to those used commonly for patients maintained on insulin therapy."

Only minimum side-effects were encountered during the study which led the physicians to believe "the chief problem . . . is not toxicity but rather the harmful effects of uncontrolled diabetes in patients unwisely chosen for tolbutamide treatment."

During the first month of the study 136 patients were found to have abnormal blood and urine sugar values and were declared to be failures. The remaining patients were treated for less than one month and excluded from consideration.

In discussing the study, the physicians said, "it should be emphasized that certain of the so-called failures with tolbutamide are in reality due to failure of the patient to follow diet instructions."

Keeping the patient on the proper diet is a major problem. "Some patients receiving medication orally

(Continued on Page 40)

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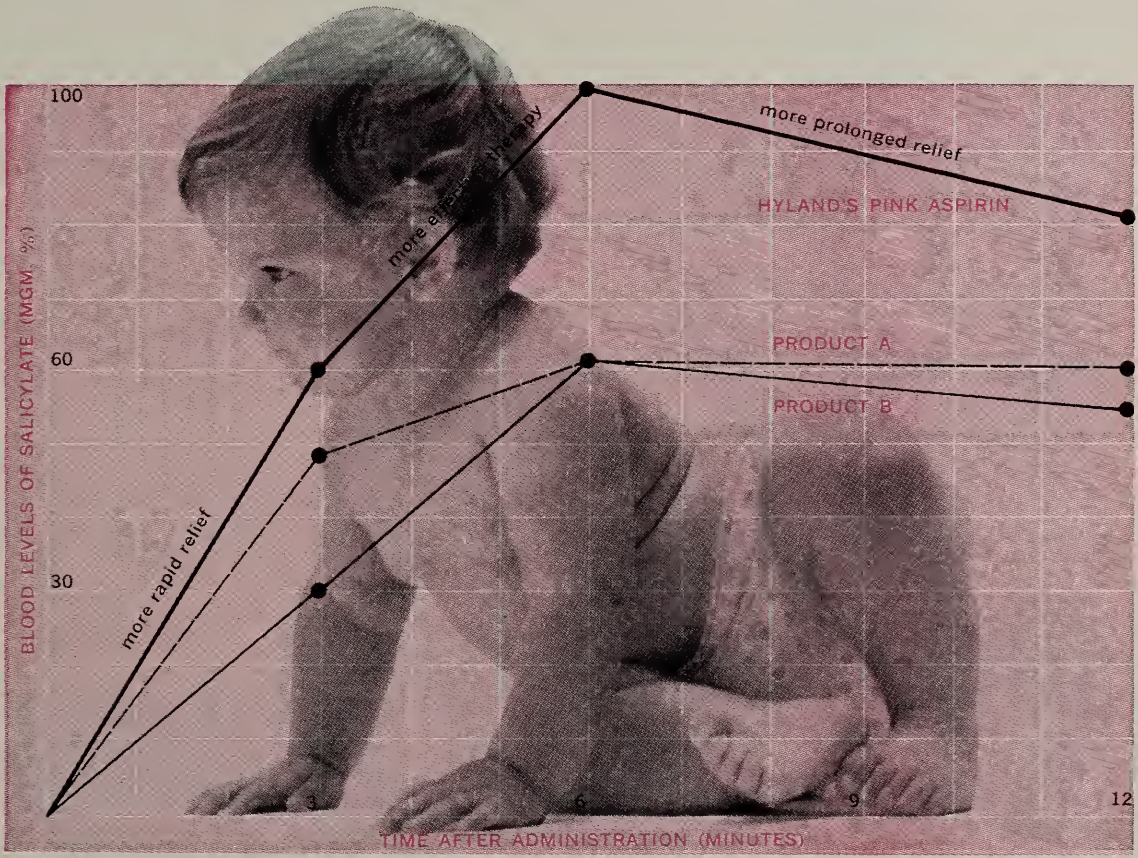

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New A.M.A. Exhibit on Fitness

"Seven Paths to Fitness" is the title of a new American Medical Association exhibit slated for debut at the Public Relations Institute August 27-28 in Chicago. Sponsored by the Bureau of Health Education in cooperation with the Bureau of Exhibits, the new display emphasizes the following seven avenues to health and fitness: Nutrition, relaxation, play, exercise, dental care, medical care and work. Over-all murals depict the sources and activities in each category. The exhibit is primarily intended for professional audiences such as physicians, educators and others having a direct interest in physical fitness. It will be available for bookings after September 1 through the Bureau of Exhibits. (A smaller type exhibit on the same subject will be completed later.)

—*A.M.A. News & Notes*

Diabetic Drug Found to Have Limited Effectiveness

(Continued from Page 34)

instead of by injection may not be so impressed with the existence of diabetes and the necessity of following a diet."

Introduction of tolbutamide, they said, "has called attention anew to the fundamental and striking value of a restricted diet in the treatment of diabetes."

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Nonpolio Viruses Found to Cause Paralysis

The development of paralytic disease after the individual has received polio vaccine doesn't necessarily mean the vaccine failed.

The disease may have been caused by a virus other than a polio virus, a recent University of Pittsburgh study has shown.

Two properties heretofore believed to be unique for polio viruses—the ability to produce paralytic disease manifestations and the ability to produce similar antibody responses in the body—were found to be shared by ECHO and Coxsackie viruses.

The study, made by a group headed by Dr. William McD. Hammon, is reported in the June 7 issue of the *Journal of the American Medical Association.*

They explained that polio, Coxsackie, and ECHO viruses are all enteroviruses, which have many properties in common, including the ability to multiply in the human gastrointestinal tract with or without producing disease.

Disease, when it does occur, most frequently involves the central nervous system. Polio viruses have been believed to be the only ones to cause paralysis. ECHO and Coxsackie viruses have been associated with aseptic meningitis.

In their study, the researchers found that six cases of paralytic disease originally diagnosed as polio were probably caused by Coxsackie and ECHO viruses. These viruses, but no polio viruses, were isolated from the affected patients. The cases occurred during the 1952 field trials of gamma globulin as a polio preventive. Three were considered as gamma globulin failures, the authors said.

Whether the enteroviruses isolated in the six cases were the respective causative agents is not unequivocably established, they said. However, they were isolated during the acute phase of illness, and, in the past, the demonstration of a polio virus infection during the acute phase has been accepted as diagnostic.

In addition to the six cases of paralytic disease, the researchers studied 10 cases of aseptic meningitis and a group of normal individuals for the antigen-antibody response produced by the enteroviruses. They found that Coxsackie and ECHO viruses have an antigenic constitution similar to that of polio viruses.

On the basis of their study, the researchers said that in certain situations, the Coxsackie and ECHO viruses may produce disease similar to polio. These situations would be a combination of the unusually rapid spread of the viruses in the body and/or unusual susceptibility of the human.

"We feel that these six cases are examples of occasional paralytic illness caused by a nonpoliomyelitis enterovirus," they said.

(Continued in Back Advertising Section, Page 54)

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Volume 89 AUGUST 1958 Number 2

Operations on the Middle Ear and Mastoid

Changing Aspects of Treatment in Chronic Active Disease

O. ERIK HALLBERG, *M.D.*, Rochester, Minnesota

• From 1953 to 1957, inclusive, 373 patients were operated on for chronic mastoid disease at the Mayo Clinic. Mainly because of the extensive use of magnifying glasses and microscopes, through these years, closer attention has been given to the preservation or improvement of hearing by meticulous procedures on the structures of the middle ear and the use of skin grafts. It is stressed, however, that it is extremely important to eradicate the underlying disease. Illustrative cases to represent different types of procedures are presented. The author recommends closer attention to the condition of the round window in the future.

IN THE OPERATIVE TREATMENT of suppurative diseases of the middle ear and mastoid the emphasis on the functional result to the hearing has increased greatly. Before the introduction of the sulfonamides and the antibiotics, more than half of the patients with chronic suppurative infections of the ear who were seen in the operating room had widespread destruction of the tympanic membrane with pronounced disease or scarring of the mucosa of the middle ear and cholesteatoma involving the attic, antrum and mastoid. Little or no attention was paid to preservation of hearing, and radical mastoidectomy was the operation of choice. Lately, however, this condition is rarely seen, and the majority of patients have superior or posterior perforations leading into the attic or mastoid antrum or both. For the past 20 years my colleagues and I have preferred to use the Bondy modification of radical mastoidectomy combined with the Lempert flap as used in the fenestration operation. In this manner, the hearing is usually preserved and often is improved.

From 1953 through 1957 a total of 373 patients were operated on for chronic mastoid disease at the Mayo Clinic. The various types of procedures used and some of the results will be mentioned in a general discussion of the surgical approach and surgical technique and procedures.

Straight middle ear procedures for large or small perforations without active middle ear disease will not be considered in this presentation.

SURGICAL APPROACH

Postauricular incisions were used entirely for operations on the middle ear and mastoid until about 1940, but since the advent of the fenestration operation Lempert's endaural incision has been replacing the postauricular incision. As a rule, both the postauricular and the endauricular incisions render the operative field equally accessible and can be compared with the use of either McBurney's or

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Section of Otolaryngology and Rhinology, Mayo Clinic and Mayo Foundation, Rochester, Minnesota.

The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

Guest speaker's address: Presented before the Section on Ear, Nose and Throat at the 87th Annual Session of the California Medical Association, Los Angeles, April 27-30, 1958.

the lateral rectus incision for appendectomy; each approach gets the appendix out. The endaural incision, however, allows easier removal of packs and facilitates cleaning and ventilation. This incision also makes the middle ear more accessible.

Of 72 patients operated on for chronic mastoid disease in 1953 at the clinic, 35 had postauricular incisions. Since then, the endaural incision has been favored; in 1957, postauricular incisions were employed in only seven of 85 patients. My colleagues and I, however, still regard the postauricular incision as the approach of choice in acute mastoiditis, destructive labyrinthotomy for Ménière's disease and operations on the facial nerves such as neurolysis or nerve grafts.

THE CHOLESTEATOMA PROBLEM

In our earlier cases, we, like most otologists, were influenced by the opinion of Nager that the matrix of the cholesteatoma would form an excellent epithelial lining for the radical cavity, and an effort was made to preserve it. However, in some cases the cholesteatoma rapidly formed again and frequent removal was necessary; occasionally, it would cause erosion of the horizontal semicircular canal which resulted in episodes of dizziness. During the last ten years, it has been our practice, therefore, to remove all vestiges of cholesteatoma. When the Lempert type of flap is used, there seems to be no definite advantage in preserving the matrix, and indeed when Lempert flaps and skin grafts are both used, it is extremely important to remove all vestiges of cholesteatoma. Magnification is a must during this procedure. As has been stressed by Juers, it is surprising how many fingerlike projections of cholesteatoma can be found around the semicircular canals.

Cholesteatomas were found in 65 per cent of the patients operated on for mastoid disease at the clinic from 1953 to 1957; the size varied from large to small, but the cholesteatoma practically always filled the attic and often extended beyond into the mastoid antrum and mastoid proper.

SURGICAL TECHNIQUE AND PROCEDURES

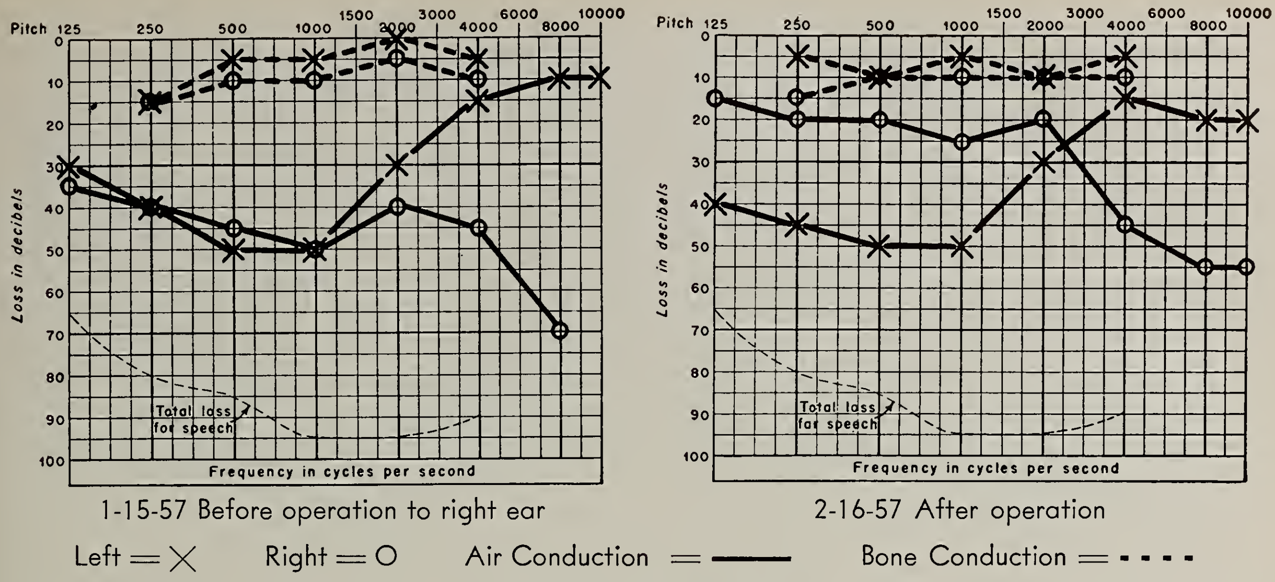
Before 1940, mastoid operations at the clinic were always done with hammer, chisel and curet. Since the advent of the electric bur, this instrument has almost entirely taken over. The new fast burs are safe and easy to manipulate. Magnifying glass or microscope, or both, are always used in operations on the middle ear. In more than half of our cases, the incus and head and neck of the malleus were involved in the cholesteatomatous process and had to be removed. Very often, the cholesteatoma extended only to the level of the facial nerve and did not involve the stapes itself. As a rule, the removal of the incus and head and neck of the malleus does not result in further deterioration of the hearing, presumably because the ossicular chain had already been interrupted before the operation and had not been transmitting sound. Davison stated that 54 per cent of his patients from whom the incus and head of the malleus were removed had hearing at or above the 30-decibel level. The good hearing in these cases could be due to the presence of a mobile membrane providing sound pressure transformation for the oval window and sound protection for the round window, also described by Wullstein.

It is not necessary to remove granulation tissue completely from the middle ear, since it has a tendency to shrink when the cause is removed. This was recently stressed by a Russian otologist, Rastopchin.

In our series even though the incus, and head and neck of the malleus were often imbedded in the cholesteatoma, if the ossicular chain seemed intact and no pathologic change was present in the ossicles themselves, they were left intact. In the last three years, an attempt also was made in such cases to save the bridge, as originally described by Heath. The flap was draped over the bridge to cover the ossicles. The small perforations were squeezed together and allowed to heal. If perforations were large, they were covered with skin grafts taken from the forearm or from behind the auricle.

In about a third of our patients, the incus was either not identifiable or was extensively diseased. Since the ossicular chain then was broken, the procedure of choice was to remove the head and neck of the malleus also and bring the posterosuperior end of the malleus in contact with the capitulum of the stapes. This procedure would keep hearing at the preoperative level at least, and often would improve it by 15 to 20 decibels.

Tympanoplasty. If most of the drumhead and malleus also were badly diseased or destroyed, the mucous membranes over the upper part of the promontory were either removed or, if possible, turned over. A free skin graft taken from behind the ear, forearm or the abdominal wall was then applied, in an attempt to maintain communication of the Eustachian tube with the round window. The graft was then firmly pressed up against the capitulum of the stapes. This method was first developed by Miodonski in Poland in 1951, and its usefulness was further reported on in 1957 by Sekula. During 1956 and 1957, tympanoplasty of this type was done in 37 patients at the clinic, and generally speaking the results have been satisfactory in improvement of hearing as well as keeping the ear dry. About 40 per cent had improvement of hearing of from 10 to



1-15-57 Before operation to right ear

2-16-57 After operation

Chart 1.—Audiograms in Case 1

30 decibels; in the others, the hearing was essentially unchanged except for two patients whose hearing deteriorated further. The following case is a typical example:

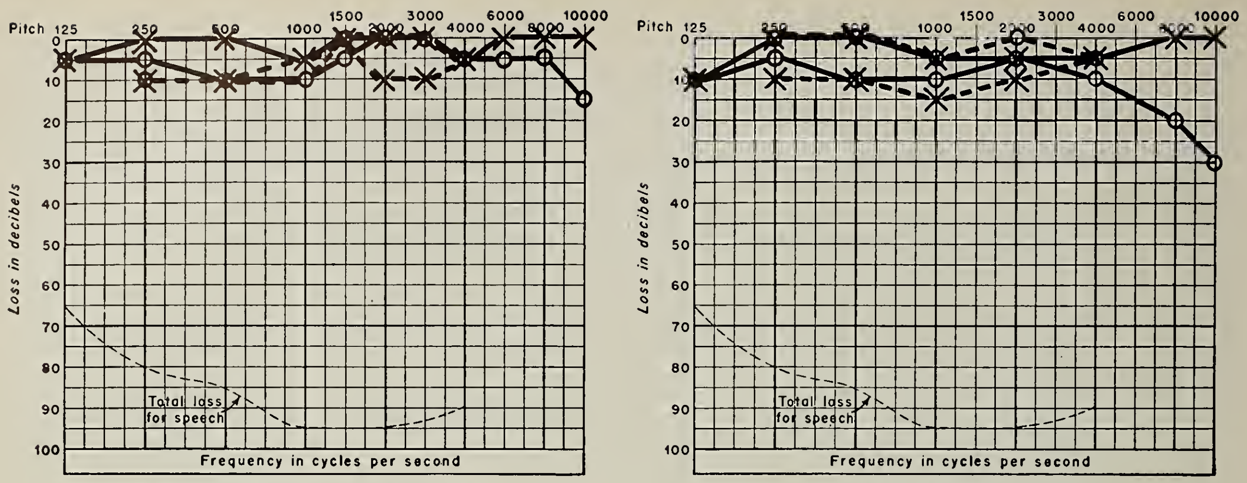
Case 1. A 26-year-old man was first observed in the ear, nose and throat section of the Mayo Clinic in 1953. He gave a history of having had a foul-smelling discharge from the left ear intermittently for several years and of an occasional earache which was relieved when the ear started to drain. He was found to have an attic defect on the left, and roentgenograms showed pronounced sclerosis of both mastoid processes. The right drumhead was scarred and thickened, but no perforation was seen. A modified radical mastoidectomy was done on the left, using the endaural approach. A large cholesteatoma which had destroyed the incus and head of the malleus was found. A Lempert flap was used. Unfortunately, an audiogram was not made; however, fork tests revealed decided deafness of conduction type on the left.

The patient returned in January, 1957, because of foul-smelling drainage from the right ear of a year's duration. He was gradually becoming more and more deaf. Upon examination it was found that most of the right drumhead was gone, and cholesteatoma had extended down from the attic. An audiogram showed pronounced bilateral deafness of conduction type. The cavity resulting from the modified radical mastoidectomy on the left was dry and completely epithelialized. Right endaural mastoidectomy with tympanoplasty, using a skin graft 25 microns thick from the abdomen, was carried out. The mucous membrane over the upper half of the promontory was stripped off, turned over, replaced and covered with the graft in an attempt to maintain communication between the Eustachian tube and the round window. Before this was done, a small cholesteatoma occupying the mastoid antrum and attic was removed. The incus and malleus were not identifiable. The skin graft was pressed firmly over the capitulum of the stapes. The result was most gratifying (Chart 1).

If most of the drumhead is intact and the attic defect is small, a skin graft to the middle ear is, of course, not necessary. Unless the bridge can be saved, I do not consider that it is of particular importance to save the incus and head and neck of the malleus, since mobility is impaired. Hall and Rytzner in Sweden have tried total or partial stapedectomy with autotransplantation of ossicles. The theoretical background for such a procedure is the well-known fact that birds require only one ossicle in the transmission mechanism of the middle ear—the columella—for adequate hearing.

Tympanoplasty With Intact Ossicles. Best results, of course, as far as maintaining or improving hearing to normal or near normal levels is concerned, are seen in patients when the ossicular chain is intact, not scarred down, and when the flap can be draped over the bridge, thus not impeding the mobility of the ossicles. Cases 2 and 3 are typical examples.

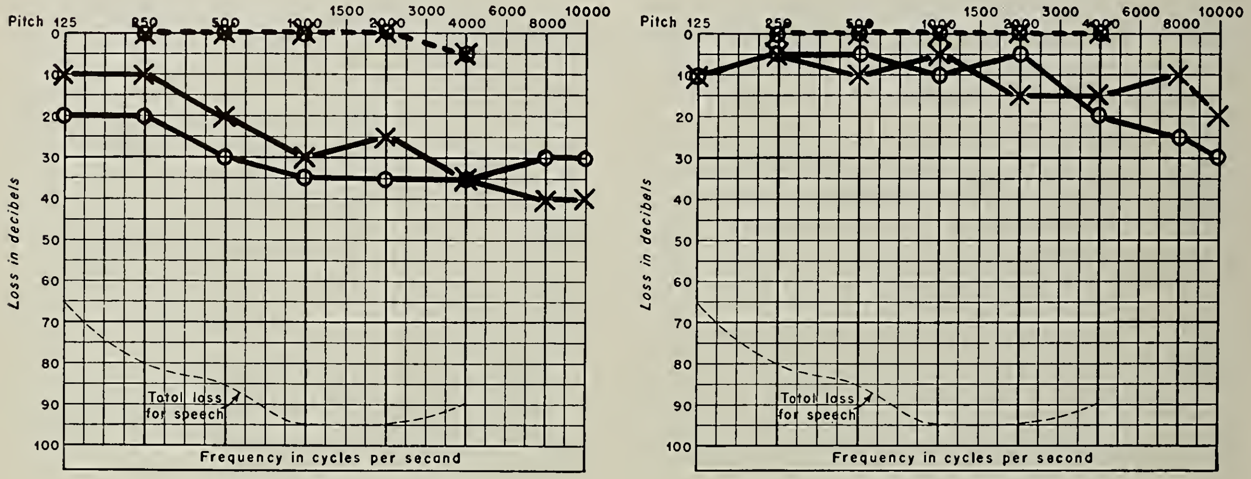
Case 2. The patient, a 16-year-old youth, had foul-smelling drainage from the left ear for years. Upon examination much foul-smelling granulation tissue was observed in the canal. In roentgenograms of the mastoids sclerosis on the left was noted. Modified left endaural mastoidectomy was done for chronic mastoiditis with much granulation tissue. The ossicles looked good. Some granulation tissue was left in the middle ear. The bridge was left intact and a Lempert flap was draped over it. Audiograms showed that the patient had normal hearing on admission and that he continued to have essentially normal hearing six months later (Chart 2).



1-4-54 Operation done 6-28-54 6-14-55

Left = ╳ Right = O Air Conduction = —— Bone Conduction = - - - -

Chart 2.—Audiograms in Case 2



4-1-56 Preoperative 5-12-56 Postoperative

Speech Reception Threshold Rt.—30 Lt.—30 Most Comfortable Loudness Rt.—55 Lt.—55

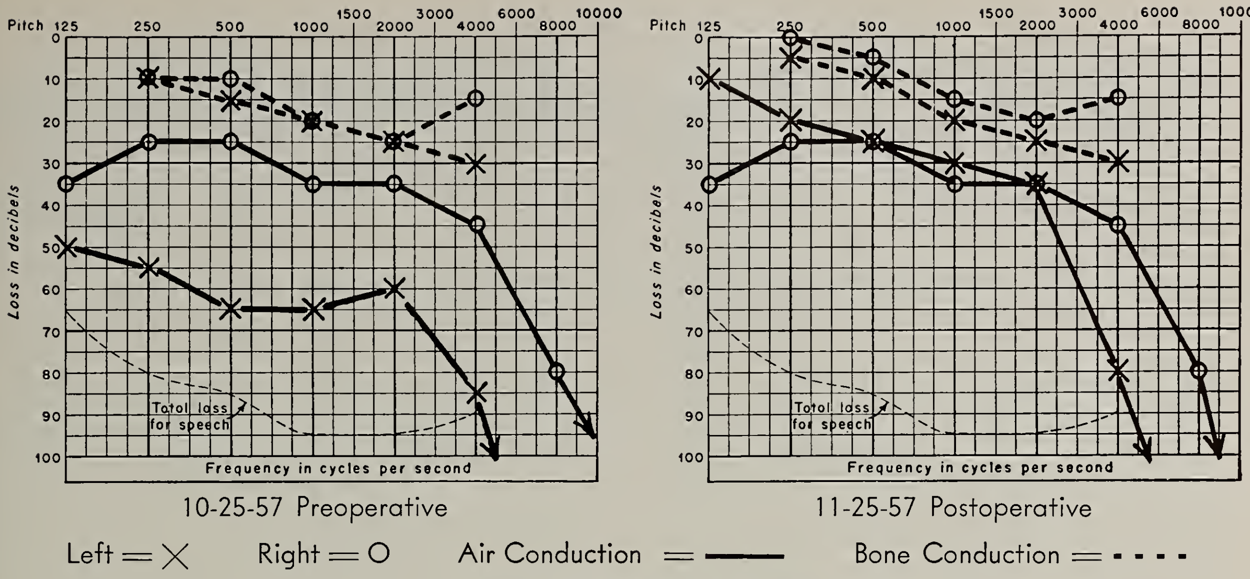
Answers fairly consistent.

Left = ╳ Right = O Air Conduction = —— Bone Conduction = - - - -

Chart 3.—Audiograms in Case 3

Case 3. The patient, a boy six years of age, had a large cholesteatoma in the right mastoid. The ossicles and bridge were saved and a Lempert flap was draped over it. At the same time, myringotomy was done on the left with evacuation of fluid. Because of recurrent adenoids, adenoidectomy under direct vision was done also in an effort to prevent recurrence of the ear infection. The preoperative and postoperative audiograms are shown in Chart 3.

Procedures for Intact Membrana Tensa With Diseased Ossicles. If the membrana tensa is intact but the incus and head of the malleus have to be removed, the long handle of the malleus is partially dissected free and laid up against the capitulum of the stapes. If the long handle of the malleus also has to be removed or is not identified, the drumhead then is draped carefully over the capitulum of the stapes in an effort to obtain the so-called columella effect. Of 85 patients with chronic mastoid disease operated on at the clinic in 1957, 25 were handled this way. Twenty of these patients had preoperative and postoperative audiograms. After operation, hearing had improved 10 decibels or more in nine patients, was essentially unchanged in eight and had deteriorated further in three. Case 4 is a typical example.



10-25-57 Preoperative

11-25-57 Postoperative

Chart 4.—Audiograms in Case 4

Case 4. A 38-year-old man was first seen in October, 1957. His main complaint was of intermittently draining ears since childhood. The right ear had stopped draining several years before admission, but in the left ear the foul-smelling discharge persisted. Deafness had progressed considerably during the three or four months preceding admission. Upon examination a dry central perforation was observed on the right drumhead and there was a small attic defect from which cholesteatoma was brought down on the left. Roentgenograms showed sclerosis of both mastoids. An audiogram (Chart 4) showed deafness of conduction type which was moderate on the right and much more pronounced on the left. Left endaural tympanomastoidectomy was done. A large cholesteatoma was found in the mastoid antrum and attic. The incus was extensively diseased and had to be removed, as were the head and neck of the malleus. The long handle of the malleus was then partially dissected out, and the posterosuperior end was firmly pressed up against the capitulum of the stapes. The small perforation in the attic was eliminated by pushing the edges together and laying them down as in the Lempert flap employed in the fenestration operation. A postoperative audiogram showed that the moderate deafness of conduction type on the right was unchanged but the pronounced conduction type of deafness on the left was improved to the level of that on the right. The hearing on the right was improved further by covering the perforation with a patch.

Older Procedures Compared with New Ones. Most otologists agree now that all of the cholesteatoma has to be removed; for this reason, mastoid operations are probably done in much the same manner all over the world. However, no set pattern can be made when it comes to operations on the middle ear. The procedure selected depends entirely on the findings at the time of operation.

In a recent communication Williams stressed that there has been a tendency to neglect the underlying disease and to direct all the attention to the hearing. For this reason it is feared that some of the hard-learned lessons of the past may be forgotten in the enthusiasm for restorative procedures. Chronic mastoid diseases are still with us, and patients are still seen who have severe complications such as brain abscesses and other extensions of the disease. For this reason, otologists must not forget that elimination of disease is their first consideration and improvement of hearing second. I cannot but feel from many recent reports that operation of the middle ear has been turned into surgical gymnastics. It must not be forgotten that many patients are much more concerned with the foul odor of the discharge than the hearing, especially if the hearing is normal in the other ear.

The physiologic principles underlying the transmission of sound have been explained by Wever and Lawrence. However, applying these principles to the diseased and deformed middle ear is a different matter, and the ultimate outcome of hearing after operation is often unpredictable. Case 5 stresses this point.

Case 5. The patient, a boy 14 years of age, was first examined in 1954. He was found to have an acute exacerbation of chronic otitis media on the right with profuse drainage and some mastoid tenderness. The mastoid was full of pus and cholesteatoma, and none of the structures of the middle ear, including the crura of the stapes, were identifiable. A straight radical mastoidectomy was done; no skin grafts were used. The patient also had erosion of the right horizontal semicircular canal; and, to top it all off, a cerebellar abscess developed which was operated on two months later. In spite of all this,

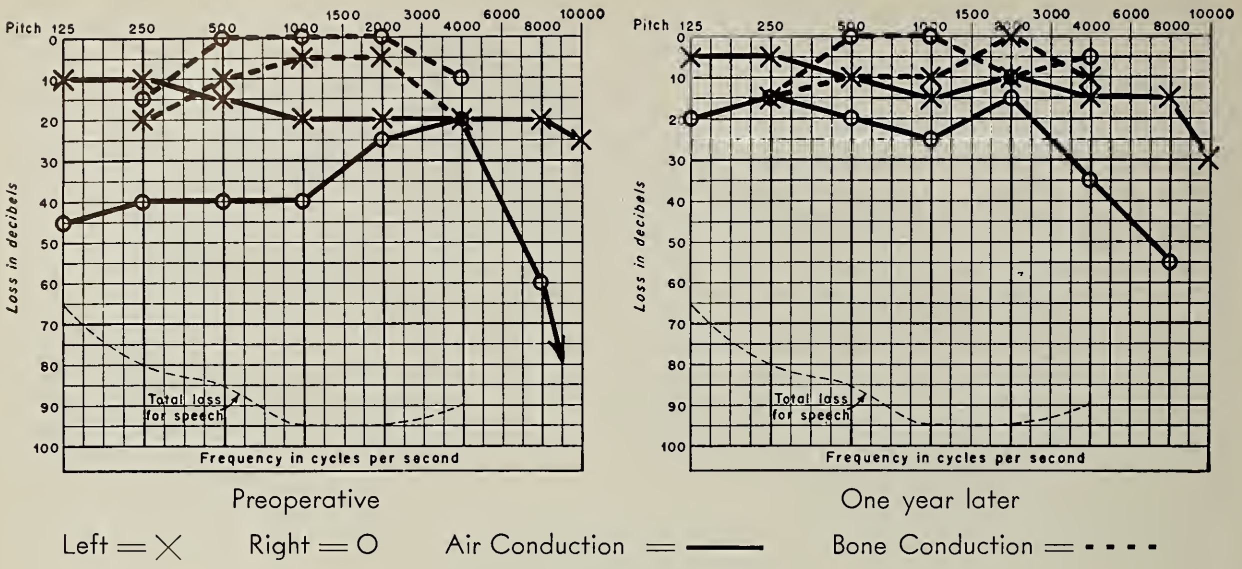


Chart 5.—Audiograms in Case 5

the audiograms (Chart 5) showed a definite improvement of hearing which was still in effect a year after operation.

EFFECT OF OPERATION ON HEARING

Generally speaking, if the loss of hearing was fairly moderate before operation, for example at the 20 to 40-decibel level, it either tended to remain that way or improved. However, if the hearing was down to 60 to 70 decibels, improvement of hearing was the exception rather than the rule in spite of good to fair hearing reserve. One of the reasons may be that too little attention has been paid to the condition of the round window, and I agree with Cawthorne that more attention should be paid to this region. In order to do this it is important first to severely lower the facial ridge.

THE HANDLING OF COMPLICATIONS

Dealing with the complications of mastoid disease has changed somewhat too. Of the 373 patients operated on at the clinic for mastoid disease from 1953 through 1957, 36 were found to have fistulas either over the "surgical dome" of the labyrinth or farther back on the horizontal semicircular canal; in only four of these was labyrinthectomy necessary. The more liberal use of antibiotics is, of course, responsible for this more conservative attitude. By not disturbing the defect, the hearing also was maintained.

SKIN GRAFTS

In an effort to promote quicker healing, my colleagues and I have used the skin graft more and more since 1950. At first, we started with the use of full-thickness skin grafts, but these would often slough off. Now the split-thickness skin graft is the rule except for small grafts used in tympanoplasty where the graft is often taken from the forearm with a thick center and thin edges. The grafts and the Lempert flap are held firmly in place by a couple of ¼-inch gauze packs, lightly covered with hydrocortisone ointment. These packs are kept in place for about ten days. The skin is taken from the postauricular region, abdomen or forearm. I prefer the forearm because it is easy to get at and because it is hairless. In women, the graft is taken most often from the abdominal wall.

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Antibiotic Resistant Staphylococci

Familial Infections Caused by Exposure of Babies in Hospital Nurseries

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• An antibiotic resistant staphylococcus with bacteriophage pattern 52/42B/80/81* is frequently responsible for infectious outbreaks in the newborn nursery. Some time after an outbreak had occurred in the University of California's hospital nursery, family members of the infants were found to be infected with this strain. Two families were studied in detail. In one of them, infection developed in six of the seven members within eight months after the infant's arrival. In the other, half of the family members had recurrent infections during a 13-month period.

Infants who left the nursery as asymptomatic carriers were found as likely to transmit the infectious strain as those with clinical infection. Considerable time sometimes elapsed before infection developed in either the infant or the family members. In one instance the first familial infection occurred six months after the infant had left the nursery as an asymptomatic carrier.

Newborn infants are quite likely to disseminate antibiotic resistant staphylococci which they may acquire from a hospital nursery. Infections developing among persons in contact with a young infant must be treated with the possibility of a resistant hospital staphylococcus in mind.

HOSPITALS HAVE BECOME breeding grounds of antibiotic resistant staphylococci as a result of the intensive use of antibiotics. Most staphylococci now isolated from hospital-acquired infections are resistant to penicillin and the tetracyclines, and many are resistant to other antibiotics as well. Although this has been primarily a hospital problem, cumulative evidence indicates that resistant staphylococci are no longer confined to hospitals and are increasing in the community at large. The incidence of penicillin-resistant strains in the nasal cultures of blood donors was observed to increase from 4 per cent in 1949 to 13 per cent in 1955;[9] 18 per cent of blood donors in 1954 were found to carry penicillin-resistant strains in their throats.[3]

Some antibiotic-resistant staphylococci now present in the general population may be products of indiscreet use of antibiotics in the treatment of patients at home or in physicians' offices, but our observations and those of other investigators suggest that many have been seeded in the community by patients who have been in hospital. In one hospital 88 per cent of the staphylococci isolated from the upper respiratory tract of adult patients who were being discharged were found to be penicillin-resistant.[2] In many hospitals over 90 per cent of newborn infants have been found to acquire penicillin-resistant staphylococci in their noses,[8] and they may retain such staphylococci for long periods. While adult patients seem to lose the hospital staphylococci within a few months,[2] some infants have been shown to retain them for at least a year.[4] A recent survey[5] suggested that neonatally acquired resistant staphylococci may be retained for even longer periods. Forty-five per cent of children now under five years of age were found to carry penicillin-resistant staphylococci in their noses and throats, in contrast to 18 per cent of children born before the extensive use of penicillin in hospitals.

From these various observations, it is apparent that newborn infants are an important source of the resistant staphylococci now found in the general population. This problem has recently become more serious because many hospital nurseries are now plagued by a highly infectious staphylococcus.[10] The phage pattern is variously reported as 80/81, 52/42B/80/81, or 42B/44A/47C/52/80/81* by different laboratories. This strain commonly causes neonatal impetigo and maternal mastitis, and sometimes is the organism of fatal infections such as septicemia and pneumonia. It is invariably resistant to penicillin and the tetracyclines and, although it is usually sensitive to erythromycin and chloramphenicol, variants that are resistant to these drugs have been encountered. Several paradoxical features of infectivity also characterize this strain. Although the incidence of newborn infection with it is high, infants may carry the strain for periods of from a few days to several months before the development of clinical infection. Some infants remain healthy

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*The code numbers are used to identify different strains of coagulase-positive staphylococci.

Chart 1.—Record of Infection in Infant and in Seven Other Members of Family

Age of Infant at Time of Infection in Self or Family	Infant	Mother	Father	Siblings				
				4 Years	5 Years	7 Years	9 Years	10 Years
5 days	*Carrier** *Impetigo*							
2 weeks		*Breast Abscess*						
3 months				Boil				
4 months						*Furuncle* Lymphangitis *Carrier*		
5 months								Boil
6 months		Boil						
8 months	Boil		Boil		Intermittent boils			
13 months	Negative	Another strain	Another strain	Another strain	Another strain	Negative	*Carrier*	Another strain

*Italics indicate cultures phage typed and demonstrated to be the nursery strain.

carriers indefinitely and clinical infection never develops. Either a healthy or an infected infant may transmit the strain to family members who likewise may have clinical infection after variable periods of time or may never have disease from the organism.

In January 1957 this resistant staphylococcus suddenly appeared in our hospital nursery. The outbreak of neonatal impetigo and maternal mastitis which resulted was similar in character to that experienced in many other hospitals within the past few years. Fortunately, our outbreak was of relatively short duration and subsided spontaneously in about two months without fatalities. Because of our intense interest in the problems presented by resistant staphylococci, our nursery was already under close bacteriological surveillance at the time this outbreak occurred, and we were in a position to study its genesis.[6]

STUDY OF SUBSEQUENT INFECTIONS

The infection or carrier state of each infant who left the nursery was investigated, and all staphylococci were phage typed. Subsequent infections among these infants or their families were noted, and cultures were obtained where possible for phage typing. The resulting observations demonstrated that infants born during the outbreak frequently transmitted the nursery staphylococcus to members of their families. The families of two infants who were most intensively followed serve well to illustrate this fact.

Chart 1 shows the record of infection in an infant and the parents and five siblings. The newborn infant had impetigo when it left the nursery on its fifth day, and also harbored the infectious strain on various unaffected portions of the skin and mucous membranes. In the second week postpartum the mother developed a breast abscess which yielded the same strain as that which had affected the infant. Within the first eight months of the infant's life, all family members had staphylococcal infections except the nine-year-old sibling. Only the seven-year-old child's infection received medical attention —a furuncle with lymphangitis from which the infectious strain was recovered. When the infant had reached its thirteenth month of age, nose and throat cultures were obtained from all members of the family. At this time, only the nine-year-old child who had never had an infection was found to carry the infectious strain. Interrogation of this family elicited that a two-year-old cousin who frequently played in their home also had had frequent boils. During the fourteenth month the cousin reported to the Pediatric Clinic with impetigo of the lower extremities. Cultures of specimens from the affected skin and the nose grew the infectious staphylococcus.

Chart 2 shows the record of infection in another family, consisting of an infant, the parents and four siblings, which remained under somewhat more complete bacteriological observation. The infant left the nursery on the fourth day postpartum as an asymptomatic carrier of the infectious strain. Within the next three months the various family members had intermittent boils, but only the infant received medical attention for the lesions. Phage typing proved the organism to be due to the infectious strain. In the fourth month postpartum, the mother had two boils and impetigo in the perineal region. Cultures of material from the nose and throat obtained from the entire family at this time revealed that the mother, the infant, and two siblings were

Chart 2.—Record of Infection in Infant and in Six Other Members of Family

Age of Infant at Time of Infection in Self or Family	Infant	Mother	Father	Siblings			
				2 Years	4 Years	6 Years	8 Years
4 days	_Carrier_*						
Intermittent boils, various family members							
3 months	_Boil_						
4 months	_Carrier_	_Carrier_ Boils, Impetigo	Negative	_Carrier_	_Carrier_	Another strain	Another strain
Tetracycline, all family members							
7 months	_Carrier_	_Carrier_	Negative	Another strain	_Carrier_ _Furuncle_	_Carrier_	_Carrier_ _Furuncle_
Erythromycin, all family members							
7.5 months	_Carrier_	_Carrier_	Negative	_Carrier_	_Carrier_	_Carrier_	Another strain
12 months					Furuncle		Furuncle
13 months	Negative	_Carrier_ _Boil_	Negative	Negative	Another strain	_Carrier_	_Carrier_

*Italics indicate cultures phage typed and demonstrated to be the nursery strain.

carrying the infectious strain. The attending physician, not aware that the strain was tetracycline-resistant, treated the entire family with tetracycline for several weeks, without benefit. In the seventh month two siblings had furuncles due to the infectious strain, and they as well as three other family members were again found to be carrying the organism in the nose or throat. The entire family was then treated with erythromycin, to which the strain was known to be sensitive *in vitro*. However, after a week of therapy four of the five previous carriers continued to harbor the infectious strain in their throats; it was also now obtained from the throat of the two-year-old child. (This illustrates the well known difficulty of clearing the throat of a pathogenic organism. Similar failures have been experienced when attempting to clear the throat of hemolytic streptococci.) Infections continued to occur in this family. When members of the family were last examined, at the thirteenth month, the infectious strain was recovered from the nose, the throat and a boil of the mother, as well as from the nose and throat of two siblings. At this time cultures from the nose and throat of the infant were negative, but the strain seems securely established in this family and likely to persist.

Similar observations on familial infections, although somewhat less completely documented by phage typing, have been reported by Colbeck,[1] Kempe,[7] and Wentworth, Miller, and Wentworth.[11] These observations leave little doubt that the newborn is quite likely to disseminate staphylococci acquired in a hospital, and they demonstrate that staphylococcal infection in persons who are in contact with newborn infants are not likely to respond to antibiotics prescribed at random. Penicillin and the tetracyclines are likely to be valueless, and other antibiotics should be considered. Antibiotic sensitivity tests are an essential guide in the management of severe infections and of infections that do not readily respond to the antibiotic used first.

The staphylococcal infections now dealt with by pediatricians and general physicians must be treated with the possibility of a hospital strain in mind. Association between the infection and previous hospitalization of the patient or members of his family is not always readily apparent, as was illustrated by a case in the present study. Incidental to our research, phage typing has been performed on all staphylococci observed in the hospital's routine diagnostic laboratory. One culture received in July was puzzling for it came from a carbuncle of an outpatient, and the phage pattern was identical to that which had caused an outbreak of infection in the nursery six months previously. Upon examination of the patient's record it was noted that she had given birth to a premature infant in our hospital just at the time of the outbreak. The baby was among those who left the nursery as an asymptomatic carrier of the infectious strain. Since neither the mother nor the child had had clinical infection during the intervening months, it is doubtful whether this woman's infection would have been associated with the nursery except for the chance circumstance of our research investigation.

Antibiotic-resistant staphylococci are probably far more widely distributed in the community than is generally recognized. Their prevalence will continue to increase so long as newborn infants bring them home from the nursery and continue to carry them. A solution to this problem will rest in part upon prevention of the acquisition of resistant strains by newborn infants during their stay in the nursery.

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Doctor Is Not The Chief Victim

A PANEL OF DOCTORS and lawyers got nowhere in their discussion of malpractice suits the other day in San Francisco.

Launching the argument, Judge Eustace Cullinan asked: "Why should doctors think they should be immune to malpractice suits?" This question puts emphasis on the wrong aspect of the situation growing out of the trend toward bigger and more frequent damage suits filed against doctors by disgruntled patients.

The ultimate victim is not the doctor but the patient, the person who needs the benefits of new developments in medicine and surgery. Most of these are still experimental to a certain degree.

Many doctors find themselves sticking to the old and time-tested treatments. The patient may be denied a "miraculous" recovery, but the doctor will be spared a malpractice suit.

For the good of both, the malpractice suit epidemic needs to be checked, but not by denying wronged parties the right to seek redress for real incompetence, real negligence. A step in the right direction is being taken by the profession in seeking to get doctors to abandon their unwillingness to testify against one of their own number; when courts and juries can believe that expert testimony in defense of an accused doctor is honest testimony and not motivated by "we-must-hang-together ethics," damage awards will be more realistic.

—Redwood City (California) "Tribune"

Diagnostic Abdominal Aspiration

Its Use in Acute Abdominal Conditions

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• Aspiration of the abdominal cavity to withdraw fluid that collects in almost all cases of intra-abdominal disease that necessitates operation is a relatively easy and safe procedure that can help in deciding for or against operation in borderline cases.

Diagnostic aid is given by observing the color, odor and cell content of the fluid. Inability to obtain fluid, although in general reassuring, cannot be trusted absolutely, for there may be severe disease without aspirable exudate.

Sometimes the intestine may be punctured by the aspirating needle, which contaminates the aspirate but apparently does not bring about leakage of bowel content.

THE LONGER THE DELAY before operation, the greater the mortality of acute abdominal conditions. It is an established fact that for every four hours' delay in operating upon a perforated duodenal ulcer or a progressive intestinal obstruction, the mortality rate increases by 25 per cent. This lethal time factor, generally speaking, holds true for many abdominal catastrophes. Although, in the majority of cases a correct diagnosis is made, operation is performed and the condition satisfactorily remedied, this is not always the case. Indications for or against operations are not always clear-cut, routine diagnostic procedures frequently do not indicate the severity of the pathologic changes and operation may be dangerously delayed. Sometimes operation is done when none is necessary. In such cases, aspiration of fluid from the abdomen may greatly aid toward swift appraisal and prompt operation. A common factor in all peritonitis is rapid formation of an exudate. The peritoneal lining weeps, pouring out fluids of various colors. It has been shown in animal experimentation that within an hour after strangulating obstruction occurs, cloudy fluid can be aspirated; and that over the next four hours the fluid obtained by serial aspirations gradually changes from cloudy to yellow, then tan and finally to a bloody color. Microscopically examined, the cloudy and yellow fluid may be seen to contain many leukocytes, the tan fluid a mixture of varying numbers of erythrocytes and leukocytes, and the bloody fluid a great many erythrocytes.

Aspiration of fluid for diagnostic purposes may be done with a No. 18 spinal needle 2 inches long with stylet in place on a 10 cc. syringe. With the patient lying on his right side and under 1 per cent xylocaine local infiltration anesthesia, the needle is gently inserted at the lateral edge of the rectus muscle, first in the lower quadrant, then in the upper quadrant; and if no fluid is obtained the patient is placed on his left side and the procedure repeated. Aspiration is not considered "negative" until no fluid is obtained in any of the four quadrants. There is less likelihood that the needle will penetrate the intestine than might be supposed, for it is mobile and elusive. Even if it is pierced, apparently no great harm is done. Nevertheless, a needle ought not be inserted through or near operative scars, for a loop of bowel fixed to the underlying abdominal wall by adhesions might be punctured more easily.

Contrary to most opinions, I find that abdominal distention is not a contraindication to aspiration. Indeed, in the majority of cases of intestinal obstruction in which I have done positive diagnostic aspiration, the abdomen was decidedly distended. It was shown in animals by Moretz and Erickson[1] that the intraluminal pressure has to be as high as 250 mm. (mercury) before air can escape through a puncture hole in the intestine—a pressure far exceeding any that might occur clinically. According to Wangensteen,[2] the usual intraluminal pressure observed in the presence of complete intestinal obstruction in humans is 20 mm. of mercury.

Abdominal aspiration by the method described was done in 50 unselected cases in which the diagnosis was possible acute intra-abdominal disease. A record was made as to the amount of fluid aspirated, the pH as determined with litmus paper, the odor and the microscopic appearance. These observations were then correlated with subsequent findings at the time of operation in 49 cases and at autopsy in one case. The fluid in all cases was either neutral or basic to litmus paper; contrary to expectation, it was not acid in cases of perforated duodenal ulcers.

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In general, the amount aspirated and the amount later found to be present in the abdominal cavity were closely correlated. The fluid was positive for abdominal disease in 40 of the 50 cases, negative in eight cases and contaminated with fecal matter in two cases owing to puncture of the intestine. The fluid aspirated was generally classified simply as bloody or nonbloody, the latter being cloudy or yellow or tan. The aspirate was nonbloody in 28 cases; and microscopically it was observed to contain many leukocytes, indicative of an inflammatory process within the abdomen. The postoperative diagnosis in this group included 13 cases of acute appendicitis, nine of perforated duodenal ulcers, two of sigmoid diverticulitis and one each of cholecystitis, parametritis, mesenteric adenitis and multiple superficial contusion of the small bowel. Twelve aspirated specimens were bloody, and the presence of erythrocytes was microscopically confirmed in ten. In the other two cases there were many leukocytes rather than erythrocytes and both patients died of extensive peritonitis, in one case owing to obstruction secondary to a strangulated hernia and in the other to extensive mesenteric thrombosis. The fluid aspirated preoperatively in the two fatal cases, although classified as bloody, was much darker in color than the fluid usually so classified. From this it may be conjectured that aspiration of very dark "bloody" fluid containing many leukocytes rather than erythrocytes is indicative of extensive serious underlying pathologic change.

Included in the group of 12 cases with bloody abdominal aspirate were five cases of gangrenous bowel from various causes, four cases of ectopic pregnancy, two cases of ruptured liver and one of kidney laceration. Seven cases in which no fluid was aspirated in any of the quadrants were considered "negative" and no obvious fluid was observed at laparotomy. Included in these seven cases were two cases of early appendicitis, one of impending obstruction due to kinking by adhesions, one of partially incarcerated diaphragmatic hernia, one of acute impending perforating duodenal ulcer and two of distended Graafian follicles with impending rupture. In one case no fluid was aspirated, yet fluid was subsequently observed to be present; the operative diagnosis was bilateral salpingitis. This was the only case in which fluid was present but was not aspirated. Failure to aspirate fluid cannot be taken as assurance that disease is not present. In such cases the clinical features should continue to guide the surgeon's judgment, the inability to aspirate fluid being disregarded if other observations prevalently indicate surgical exploration.

In the two cases of contaminated aspirate owing to accidental puncture of the bowel, the fluid had a fecal odor and the presence of bowel content was observed microscopically. Although I do not hesitate to carry out aspiration—with the precautions as outlined—to withdraw fluid from an "acute abdomen," I do adhere to one contraindication: Once contaminated aspirate is withdrawn I make no further attempt at aspiration. It should be noted, however, that in the two cases in the present series in which fecal contamination occurred, the puncture could not be found on careful examination at operation and there was no evidence of leakage of the bowel. Both patients—one had acute cholecystitis and the other an intestinal obstruction—recovered readily after operation.

Although relatively safe, aspiration of the abdomen should not be used indiscriminately but should be reserved for cases in which the indications for or against operation are not clear-cut and a decision must be reached lest the patient continue to deteriorate. It might be particularly useful in dealing with infants and children who are unable to help with a description of symptoms, in cases of multiple injuries (as in automobile accidents when a patient is comatose with head, chest and abdominal injuries) and in the case of very old senile patients whose bodily response to intra-abdominal catastrophe is often minimal.

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Congenital Cardiac Defects

Indications for Surgical Repair

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WM. P. LONGMIRE, JR., *M.D.*, and BERNARD J. O'LOUGHLIN, *M.D.*, Los Angeles

• The optimum ages for the operative repair of the various congenital defects have not as yet been definitely established. With certain exceptions, it has generally been the authors' preference to delay elective operations until after the age of 18 months. In the usual case, the optimum age for the closure of septal defects is believed to be three to five years. Operative relief of stenosis of the aortic or pulmonic valves, however, is related entirely to the extent of the obstruction, age not being a factor. Although the surgical treatment of coarctation of the aorta is probably best delayed beyond the period of infancy, it is the authors' belief that in the presence of extreme hypertension, cardiomegaly or cardiac failure, early resection of the aortic block should be accomplished. As to the treatment of tetralogy of Fallot, the authors' policy is to delay operation until such time as definitive repair becomes less hazardous. Patients with severe symptoms, however, are given the benefit of some form of operative relief as soon as possible. Whether this is palliative or corrective depends upon the characteristics of the individual case.

Definitive diagnostic studies are of great aid in assessing the urgency of operative intervention. The fact that approximately one-third of the patients dealt with required operation at less than 18 months of age suggests that, in selected cases, these studies should be performed early in infancy.

THE PROGRESS OF SURGICAL THERAPY for congenital cardiac abnormalities has been so rapid that considerable controversy has arisen concerning the best treatment for the individual patient. Conflicting opinions are common. Differences in the diagnostic and therapeutic facilities available and differences in past personal experience account in large measure for these divergent views. The family physician, who usually is the first to bear the burden of advising patients with disorders of this type, therefore often feels insecure in his ability to do so. The purpose of this paper is to present policies currently followed at the Medical Center of the University of California at Los Angeles in the management of patients with congenital heart disease. As knowledge of this condition increases, revisions of present opinions will undoubtedly be necessary, and it should be borne in mind that advice given the patient today may well be obsolete tomorrow.

In general, four distinct trends in the management of congenital cardiovascular anomalies are now appearing: (1) A progressive lowering of the age at which definitive diagnostic studies are undertaken, (2) a reduction of the optimum age for elective operation, (3) operative repair of asymptomatic lesions, and (4) the increased use of total cardiopulmonary by-pass with the pump oxygenator for the definitive correction of a number of lesions. These four trends are major factors in determining the management of the individual patient at this center.

DEFINITIVE DIAGNOSTIC STUDIES

Definitive diagnostic studies include right heart catheterization, selective angiocardiography and left heart catheterization. The age at which these studies are carried out must necessarily be individualized. In general, we believe that age is not an important factor, and our experience indicates that the degree of success, as well as the risk incurred, is no different in young infants than in older children with comparable lesions. Even the combined defects encountered in early infancy and so commonly associated with cardiac failure usually can be diagnosed with little hazard by these methods. We believe that the presence of cardiac failure is not a contra-indication to definitive studies, provided the patient has been given the benefit of a reasonable trial of therapy. With the exception of typical coarctation of the aorta or typical patent ductus arteriosus, all clinical diagnoses are confirmed by definitive studies before operation. Exploratory thoracotomy is performed only if the condition of the patient is such that time does not permit these studies. This has been necessary in only one patient to date, a 48-hour-old infant terminally ill with congenital aortic stenosis.

There are several reasons for performing definitive diagnostic tests before operation. First, it is important to separate those conditions requiring cardiac by-pass on the pump oxygenator from those that do not. Second, a precise knowledge of the

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TABLE 1.—*Operative Data on Patients Undergoing Cardiac Operation Between August, 1955, and December, 1957*

Type of Cardiac Anomaly	No. Under 18 Mos.	Cured		Surgical Deaths		No. Over 18 Mos.	Cured		Surgical Deaths		Total No.	Cured		Total Surgical Deaths	
		No.	Per Cent	No.	Per Cent		No.	Per Cent	No.	Per Cent		No.	Per Cent	No.	Per Cent
Patent ductus arteriosus	8	8	(100)	0		23	22	(96)	1	(4)	31	30	(97)	1	(3)
Coarctation of aorta	6	5	(83)	1	(17)	11	11	(100)	0		17	16	(94)	1	(6)
Tetralogy of Fallot	1	1	(100)	0		11	9	(82)*	2	(18)	12	10	(83)*	2	(17)
Isolated pulmonic stenosis	6	3	(50)	3	(50)	16	16	(100)	0		22	19	(86)	3	(14)
Interatrial septal defect (secundum type)	2	1	(50)	1	(50)	10	10	(100)	0		12	11	(92)	1	(8)
Interventricular septal defects	8	3	(37)	5	(63)	12	7	(58)	5	(42)	20	10	(50)	10	(50)
Aortic stenosis	2	0		2	(100)	2	2	(100)	0		4	2	(50)	2	(50)
Miscellaneous	8	0		8	(100)	5	1	(20)	4	(80)	13	1	(8)	12	(92)
Total	41	21	(51)	20	(49)	90	78	(87)	12	(13)	131	99	(76)	32	(24)

*These patients were actually improved rather than cured, since the operative procedure was a Blalock-Taussig anastomosis.

hemodynamics involved is often of great value in assessing the urgency of operative relief and in predicting the surgical risk in a given case. Finally, determination of intracardiac pressures and flows supplies valuable information concerning the physiologic effects of various defects.

The selection of patient for definitive diagnostic studies, as well as for operation, is influenced not only by the condition of the child but also by the attitude of the parents. Some parents prefer to delay definitive study and treatment, others to proceed as quickly as possible. The wishes of the parents, if not inconsistent with the best interests of the patient, are complied with for the sake of easing parental tensions.

ANALYSIS OF PATIENTS OPERATED UPON

From August, 1955, to December, 1957, a total of 131 infants and children with congenital heart disease underwent surgical treatment (Table 1). Of these, slightly less than one-third were infants under 18 months of age. The majority of the patients in this latter group were considered to be in urgent need of operation. Many were terminally ill and some had lesions which are generally considered inoperable, yet approximately half of these infants were salvaged. It is our belief that had this group of infants been managed medically and operated upon later in childhood, the surgical mortality rate would have been considerably lower but the over-all mortality rate higher. Since the majority of the patients in the older age category presented problems of an elective nature, the cure or improvement rate in that group was higher.

Patent Ductus Arteriosus

It is our opinion that all patients with patent ductus arteriosus should be operated upon as soon as the diagnosis is established, provided the child is over 18 months of age. As to patients younger than that, only those who have a history of cardiac failure, frequent respiratory infections, growth failure or cardiomegaly are selected for operation. This is in agreement with opinions recently expressed by other investigators.^{5}

It will be noted in Table 1 that there was only one operative death in a total of 31 patients operated upon for this lesion. The patient was an 18-month-old girl in whom the shunt had already reached the point of reversal.

Coarctation of the Aorta

The diagnosis of coarctation of the aorta is sufficient indication for surgical repair of the lesion. There still remains considerable controversy concerning the optimum age for operation. The syndrome in infants of left heart failure related to this condition is well known. Some investigators[7] believe that this is best treated conservatively; others[2,4,8] are of the opinion that surgical treatment gives better results. It is our belief that in infants with extreme hypertension, cardiomegaly or cardiac failure, relief of the aortic block should be accomplished when the diagnosis is established. In other cases, surgical correction may be delayed. In appraising the degree of hypertension present in these patients, it is important to recognize that measurements made by the flush technique approximate the mean blood pressure and are, therefore, lower than the true systolic blood pressure.[13,14]

As noted in Table 1, we have operated upon 17 infants and children with coarctation of the aorta, six of whom met our criteria for early surgical correction. The youngest patient was four months of age.* The one fatality occurred in a five-month-old infant with sepsis and intractable cardiac failure. Three of the 17 patients had an associated patent ductus arteriosus.

Tetralogy of Fallot

It has recently been demonstrated that the long-term results of palliative operation for patients with the tetralogy of Fallot are quite disappointing. White and his associates[21] observed that of patients who initially survive the Blalock-Taussig anastomosis, only 69 per cent maintain good results five to eight years later. The remaining 31 per cent either die or deteriorate because the anastomosis becomes ineffective. Since there is also an initial operative mortality of 10 to 15 per cent, it is apparent that this procedure is far from satisfactory. Definitive correction, however, is still associated with a high mortality rate.[1] We find ourselves then at a transitional stage where we are abandoning one procedure while not yet fully accepting its successor. Undoubtedly, the eventual treatment of choice will be definitive repair under total cardiopulmonary by-pass. We, therefore, at present choose to delay surgical treatment of most patients until such time as definitive repair becomes less hazardous. This does not apply, of course, to patients with extreme polycythemia, with frequent spells of paroxysmal dyspnea or with severe exercise intolerance. This latter group is given the benefit of some form of operative relief as soon as possible. The choice of the type of surgical procedure depends upon the characteristics of the individual case. For example, patients with a tetralogy of Fallot who have an associated atretic or absent main branch of the pulmonary artery are probably better treated by corrective operation, since clamping of a unilateral pulmonary artery is extremely hazardous.[16] On the other hand, patients with the extreme form of tetralogy of Fallot (atresia of the pulmonary valve) are probably better treated by a palliative procedure.

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*A 17-day-old infant, successfully operated upon for coarctation of the aorta by Dr. W. H. Muller, Jr., in 1953 is not included in the present series.

To date we have operated upon 12 children with this condition with an over-all surgical mortality rate of 17 per cent (Table 1). Definitive repair was attempted in only one patient, a two-year-old child with severe polycythemia. Although anatomical repair was successfully accomplished, he died several hours after operation.

Isolated Pulmonic Stenosis

The indications for operative relief of pulmonic stenosis have not been accurately defined. The policy in many centers is to operate if the systolic blood pressure in the right ventricle exceeds 50 to 100 mm. of mercury.[6,9,10,17,18,19] As discussed in a previous publication,[15] we believe that surgical correction should be performed regardless of the age of the patient if there are signs of exercise intolerance, if the systolic blood pressure in the right ventricle is 75 mm. of mercury or more, or if cardiac failure threatens. We have operated upon 22 patients with this lesion (Table 1). Of the three who died of the operation, all had extreme cyanosis and decidedly reduced cardiac output.

Interatrial Septal Defects

It is our present policy to repair all atrial septal defects, whether they produce symptoms or not. Closure is accomplished by direct vision with the patient under hypothermia. The optimum age for repair is three to five years. Since this lesion does not commonly cause severe symptoms in infancy, operation is rarely indicated in the younger age group. In only two of 12 patients with this lesion was the operation done in early infancy. One was misdiagnosed as having a ventricular septal defect and the pump oxygenator was used for the operation. The other had intractable cardiac failure and was found at autopsy to have an associated interventricular septal defect. The surgical mortality rate in the 12 patients with interatrial septal defect was 8 per cent (Table 1).

Interventricular Septal Defects

The indications for surgical closure of interventricular septal defects are exercise intolerance, roentgenographic signs of increased pulmonary flow or cardiac enlargement, electrocardiographic evidence of ventricular hypertrophy, or elevated pulmonary blood pressure as determined by right heart catheterization. Undoubtedly, in the not too distant future, presence of the lesion alone will be sufficient indication for correction. The optimum age for operative repair has not as yet been established. Technically, closure of the defect even in the smallest infants is not difficult. However, under the age of two years the principal problems are control of a constant blood volume during cardiopulmonary by-pass and the management of postoperative respiratory complications. It is primarily for these reasons that, whenever the condition of the patient permits, we prefer to delay operation to the age of three to four years.

To date 20 infants and children have been operated upon for closure of this defect, with a mortality rate of 50 per cent (Table 1). This high mortality rate is undoubtedly due to the poor case material and to the type of pump oxygenator used in our early experience. As priority was first given to those considered to be most urgently in need of operation, 60 per cent of the patients in the series were in the so-called "50 per cent mortality group"—that is, the patient's age was under two years or the pulmonary artery pressure was greater than 70 per cent of the systemic pressure.[5] There has been but one death in the last eight operations. Although this is too small a group to calculate a dependable mortality figure of 13 per cent, we do feel that this latter figure well approximates our current overall operative mortality. In a given case, however, the risk rate may be relatively low or may be 100 per cent, depending primarily upon the condition of the pulmonary vascular bed. Increased pulmonary vascular resistance produces pulmonary hypertension and, as already stated, when the pulmonary artery pressure exceeds 70 per cent of the aortic pressure, the chances of survival are lessened considerably. Should the pulmonary artery pressure exceed that in the aorta, the patient is considered inoperable. It is important to recognize that high pressures in the pulmonary artery are often not reflected in the clinical condition of the patient and may be determined with accuracy only by right heart catheterization.

Aortic Stenosis

The indications for operative relief of aortic or subaortic stenosis have not, as yet, been clearly delineated. With accumulating experience it is rapidly becoming apparent that the risk of sudden death or cardiac decompensation is not insignificant.[3,12] For this reason, our present policy is to operate at an early age. We believe that any child with aortic or subaortic stenosis should have the benefit of operation, irrespective of his age, if he has a history of syncope or exercise intolerance, or has pronounced cardiac enlargement as determined by electrocardiographic or roentgenographic studies. If cardiac failure is imminent, operation should be performed as an emergency procedure. If cardiac failure has already occurred, operation should be done after adequate trial of digitalization.

Miscellaneous Cardiac Defects

Of the 13 patients listed in the miscellaneous category in Table 1, the only one who survived was a four-year-old girl with total anomalous drainage of the pulmonary veins. Of the remainder, two had complete transposition of the great vessels, five had some form of "persistent common atrioventricular canal" according to the definition of Wakai and Edwards,[20] and five had non-correctible complex lesions. In all of these patients cardiac operation under direct vision, utilizing the pump oxygenator, was attempted. In the two patients with complete transposition of the great vessels, complete anatomic correction was accomplished before death. Although neither patient survived, the future of this definitive approach is promising.

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Principles of Diagnosing Occupational Diseases

Special Considerations to Avoid "Creating" an Entity

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• The traditional diagnostic procedure adhered to in general medicine is too frequently neglected when a physician is confronted with a possible occupational disease. Also, the proper diagnosis in occupational medicine requires additional effort along lines of investigation not necessary in general medicine. Failure to conform to the basic steps as outlined in this paper will distort known entities or "create" false ones.

THERE ARE MANY REASONS why the diagnosis of occupational diseases* is not on the same level of proficiency as diagnosis in general medicine. In general medicine (the term is used here to distinguish all phases of medical practice from occupational medicine) only infrequently are there additions to the known causes of disease. By and large a physician is called upon to recognize entities which time has earmarked. To confirm his suspicions that he is dealing with a familiar entity he assays the history and physical findings and then confirms his diagnosis by laboratory tests previously used in similar circumstances. In short, there is a traditional effort to be as scientifically positive as possible. All this is a grooved procedure.

Furthermore, physicians in general medicine practice within an area of readily accessible knowledge. It is present in the daily conversations with their confreres, at staff conferences, society meetings and in the journals they read. By such means and within this atmosphere, entered as early as medical school days, most physicians keep abreast of the diagnostic methods used in modern medicine. But —and herein is an important premise of this communication—medical education and subsequent experience have been largely concerned with and confined to the infections and affections of communal origin.

In sharp contrast few physicians have any or at most only meager knowledge of the environmental factors in their patients' jobs. In fact very few physicians fully comprehend the term *occupational medicine*. This is understandable but lamentable. Medical schools have allowed little or no time for the subject in their curricula. Rarely is a case of occupational disease presented at hospital staff conferences or on ward rounds. Few physicians in general medicine subscribe to journals or have textbooks devoted to this subject. Yet, despite a background devoid of training or experience in occupational medicine, few there are who will not ignore the diagnostic "ground rules" adhered to in general medicine and turn to conjecture when confronted with a case related to industrial exposure.

In general medicine an erroneous or even a tardily correct diagnosis is not always necessarily detrimental to the patient. And today there are circumstances in which the rise of the therapeutic efficacy renders an exact diagnosis immaterial. Quite often the miracle drugs effect a cure before the search for the cause of disease has been initiated.

In sharp contrast, the unfounded assumption that a patient does or does not have an occupational disease entails several factors of disservice, therapeutically and economically. It is of little or no avail to treat, say, a case of anemia or dermatosis or dysfunction of any of the various systems if the cause resides in an occupational exposure and remains unrecognized. Likewise, the economic impact arising out of the delay involved in the assumption of liability among the carriers of workmen's compensation, group insurance and state unemployment insurance upon the breadwinner of a large family is one that few physicians fully appreciate. This situation is particularly acute when a physician erroneously ascribes an illness to the patient's working environment. The workman's claim then may become a badminton bird, batted back and forth for months on end.

In general medicine, as previously intimated, a disease entity becomes established and accepted very much upon the postulates laid down by Koch. His stipulations have been augmented by the biostatistic and epidemologic disciplines. Malaria, tuberculosis and other diseases could be mentioned to illustrate

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*An occupational disease is one which occurs with characteristic frequency and regularity in occupations where there is a specific hazard. The effects produced present a recognizable clinical entity.

this truth. When the cause has been established the clinical syndrome is not distorted by giving credence to unrelated signs or symptoms. A tuberculous patient could also have gonorrhea yet no one would ascribe both conditions to the same kind of exposure.

The value of and the necessity for utilizing the epidemologic approach is testified to by the report of the Committee on Occupational Cancer of the Council of Industrial Health. Therein it is stated: "The past three decades have witnessed the birth and large-scale development of experimental methods for the study of carcinogenesis. This has permitted identification of an extensive list of chemical compounds capable of causing cancer in animals in specific experimental situations. A number of these compounds are encountered in various manufacturing processes. It is not correct to assume from these two facts that the risk of developing cancer among industrial workers thereby is either increased or left unchanged. This can be ascertained only by appropriately conducted investigations, and the answer ultimately must be derived from observations on workers in specific occupations and industries. It is essential, therefore, for the investigator who would study occupational cancer, to have for comparative purposes reasonably reliable estimates on the 'normal' incidence of cancer of various types and sites."

What has been said here regarding the study of occupational cancer applies to all occupational diseases. It must be appreciated that the physician of today and increasingly in the future will be confronted with industrial hazards in which new chemicals will be introduced about which we have as yet little statistical data as to their actions upon humans. For example, in this particular geographical area considerable use and experimentation is going on with the liquid and solid fuels or propellants for missiles. About these and other recently introduced chemicals we must refrain from making premature conclusions.

Let us now consider the proper approach to the diagnosis of an occupational disease, keeping in mind that an occupational disease tends to mimic the signs and symptoms of a nonoccupational disease. Rarely can a disease resulting from an industrial exposure be identified as such by a medical examination. The initial portion of the history-taking is similar to that traditionally followed—present complaints, past medical history, inventory of systems and so forth. Then the patient is asked to describe in detail all the work he has engaged in since he left school. Here a physician must take cognizance of long employment in one trade. This is especially important if the exposure has been to certain dusts, carcinogens or those aromatic substances capable of producing blood dyscrasia. This initial phase calls for exhaustive interrogation.

The next step is to evaluate and fully comprehend the nature of the present occupational environment. One should not accept the job-title as a description of the worker's complete activities or as indicative of the presence or absence of exposure to a toxic substance. (When asked what kind of work she did, a young woman who had pronounced anemia and abnormal menses informed the physician that she worked with cement. He could not relate her difficulty to Portland cement, which is what the word meant to him. Actually she was sealing tanks with a so-called rubber cement and in the process was exposed to benzol, a recognized cause of anemia when absorbed in heavy concentrations.)

The previous example introduces the next procedure to be followed, namely, identification. In general medicine the patient asks the physician the cause of his illness. In contrast, the worker who assumes that his illness is due to his work tells the physician the cause. Therein lies a diagnostic pitfall. "It is bothering me," or "that stuff I work with is making me sick" are common utterances which are too often accepted by physicians who in any other circumstance would not permit a patient to supply a diagnosis. Almost invariably the worker does not know the chemical nature of the substance to which he has been exposed or will state some trade name or the code number of a product, which does not reveal the basic ingredients.

How does a physician identify "it" or "that stuff" to which the worker-patient refers? The answer is that he often does it by effort beyond that ordinarily required in general medicine. One cannot hope to find the answer in the usual textbooks on medicine. Sometimes a phone call to the plant physician or nurse will be sufficient, but many small plants do not have such personnel. Information from the plant manager or foreman may be correct, but too often is not. The correct information can usually be obtained by a phone call or letter to the manufacturer of "it" or "that stuff," stating the reasons for the inquiry. To obtain a complete and correct view of the substance and the circumstances, it is often necessary for the physician to go to the plant. If a physician feels that he cannot do so, or feels that he is incapable of making the necessary observations, he can get help from persons or agencies that are better trained in this particular field. He may call in a private industrial hygienist, or in some cities he may get aid from a medical school that has a department of occupational medicine. Other possibilities are local county and city health departments which sometimes have industrial hygiene departments, or the United States Public Health Service, Division of Industrial Hygiene. No matter by what means, the exact identification of the accused agent is essential.

The next logical step in diagnosis is to classify the identified substance. One must classify a dust as being either inert or as capable of producing reactive fibrosis. Classification would likewise take into consideration the application of heat to certain metals which in a cold state would be inert. Many of the industrial fumes or vapors come from the hydrocarbons. A primary differentiation is between the aliphatic and the aromatic series. Gases may then be classified as to whether they are of irritant, asphyxiant or narcotic type. One must also consider whether the substance is one that accumulates in the body or is rapidly eliminated.

The next phase of the diagnostic procedure is the utilization of laboratory procedures. Relatively few industrial poisons produce specific laboratory findings. Certain of the heavy metals may be recovered from the biological fluids. The urine sulphate ratio is often an aid in determining an undue exposure to benzol, phenol or aniline. Obviously x-ray films of the chest are valuable in detecting pneumonitis, pulmonary edema, fibrosis or nodulation. They must be interpreted with extreme care for in cases of industrial exposure there is a tendency to read more into the film than actually exists. Bone marrow studies are indicated in cases of exposure to anemia producing compounds. Scalenus node biopsy is frequently of value in searching for the cause of pulmonary disease. Estimations of radon in the expired air should be routinely done in the cases of patients handling radioactive materials. X-ray diffraction is helpful in determining the presence or absence of quartz in certain material to which an individual is exposed.

Following the steps in the foregoing outline, diagnosis may turn to what may be called the "matching process."

This involves a consideration of all possible diagnoses in light of the data assembled, matching each possibility with all supportive evidence in the data —and opposing each with all contradictory evidence. This procedure eliminates the "jumping to conclusions" technique. Failure to apply the matching process in a suspected occupational disease accounts for most of the diagnostic errors. Likewise, this method will often reveal an occupationally-caused illness when, to that point, the cause was not recognized. The following is a case in point:

Case 1. In the summer of 1957 a 39-year-old man began having periodic attacks of a sensation of constriction within the chest, with cough and dyspnea. The attacks were of short duration, usually two days at the most. After observing him on several occasions the family physician referred the patient to an allergist but multiple tests failed to reveal the cause. In January, 1958, the worker wondered if his occupational exposure might be the cause. His employer referred him to our office. In evaluating his history it was soon learned that his job-title, *spray painter*, was a misnomer; it was used only because his initial job with the company was spraying zinc chromate. For the previous two years he had been engaged in coating and backing electrical equipment. At this point in the history, identification of all material used was necessary. Except for zinc chromate, which he occasionally still sprayed, the chemicals used in his occupation were an epoxy-resin, neoprene, buna rubber, perchlorethylene and hylene. The next step was to apply the epidemiologic data. Neither from our own experience or from the literature could we bring up evidence that exposure to the epoxies, neoprene, buna rubber or perchlorethylene would result in the clinical condition confronting us, but we did not know the chemical nature of hylene. Therefore, we asked the following questions. (1) Did the patient use all these materials daily? All except hylene, which he used only once every three or four weeks. (2) How often did he have these attacks? Every three or four weeks. This seemed to spotlight hylene, but it could not be definitely blamed without determining its chemical nature. All the worker could tell us was that it was labeled Hylene, DuPont M-50. After some effort it was learned that Hylene was the trade name for methylene bis (4-phenyl isocyanate) monochlorobenzene.

This information concluded our matching process, for we knew from experience—and from the literature—that the isocyanates are capable of producing an attack of chest constriction, cough and dyspnea of short duration. The foregoing case illustrates the proper approach to diagnosis of an occupational disease. The one following is illustrative of the hazards of omitting some of the steps.

Case 2. In 1943 a 45-year-old man began working at an oil refinery, first as a general helper, then in sequence as a foreman, as stillman B and finally as stillman A. His past medical history was essentially negative and irrelevant. In August, 1957, numbness of the lower legs developed, not associated with pain. When the patient was examined in our office in January, 1958, the condition had remained unchanged. After being treated by a physician under group insurance without improvement he was referred to a neurosurgeon of excellent reputation. After a period of study the specialist referred the patient back to the original physician with the following statement: "Handles acids and chemicals: Hydrochloric acid, ethyl, lead, chromic acid used as a catalytic agent and exposed to SO_2 fumes and hydrofluoric acid." The physician's statement under the word *Impression* on the report form was "Polyneuritis lower extremities on chemical basis. Absorbed sufficient toxic material in work as a gasoline cracking plant operator to produce typical polyneuritis confined to lower extremities. It could be lead, chromic acid or other toxic chemical matter." The above quoted statement induced the worker to enter a claim under Workmen's Compensation, whereupon his group insurance underwriter ceased paying for medical care.

Let us examine certain fundamental errors in the conclusions reached by the neurosurgeon. The worker had a history of chronic alcoholism. Whether this could be a factor in his complaints was ignored. At least it was not evaluated. Next, his occupational environment was not investigated. One can easily understand that a specialist in Los Angeles is not likely to drive to Wilmington [some thirty miles] to survey the plant, but he could have obtained accurate information by other means. He should have asked himself, what does a stillman A do? The answer is that a stillman sits in a clean, well furnished room resembling one in which the board of directors might meet. On the wall of the room there are numerous dials and recording machines which indicate the levels, rate of flow, temperatures and pressure of gases and liquids existing at distant points. Only in some unusual emergency would he be exposed to any chemical. In his daily routine he would have less exposure to chemicals than would the average housewife.

So much for the failure to investigate the nature of the occupational environment. The next error was the failure to identify a specific etiological agent or specific chemical. To say that "it could be lead, chromic acid or other toxic chemical matter" is shooting in the dark. For instance, to assume that chromic acid could cause neuritis is simply an attempt to create an entity not known to exist. There is no more justification for this assumption than there is to state that numbness is due to tinea capitis. Or take the statement, "It could be lead." There is no justification for assuming the abnormal absorption of lead. Determining whether there is such absorption is easily carried out by estimation of lead in the urine or in whole blood.

Other factors of the diagnostic "matching process" as they apply to this case could be considered, but reference to the epidemiologic discipline is sufficient. In this particular case the questions should have been asked: Is numbness or neuritis of the lower extremities ever caused by an occupational exposure? If so, what are these occupations? Is there known to be an incidence of lower extremity numbness among stillmen in oil refineries? Is there a known incidence of it among any division of oil refinery workers sufficient to warrant suspicion of a relationship? In short, this case typifies the unwarranted "creation" of an occupational disease entity.

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and G. L. SMITH, *B.A.*, Los Angeles

• **A new, simple method for estimation of the sugar content of the blood, employing Clinitest® tablets such as are used for urine tests, gives quick information in cases of suspected diabetic acidosis.**

THE UTILITY of frequent blood sugar determinations in the management of diabetic acidosis and coma is often impaired because of delay in obtaining reports. Commonly this fundamental measure of the temporarily altered metabolic state is available to the clinician only at intervals varying from 45 minutes to two hours after venesection—too late to be of value except as aid in estimation of the current status by way of hindsight.

A method for the rapid estimation of blood sugar has been developed on the Metabolic Service of the Los Angeles Veterans Administration Hospital which has been found useful as an adjunct to the management of diabetic patients in acidosis. This method makes use of Clinitest® tablets, commonly used for urine testing, and other equipment that is available in any hospital ward laboratory. The method is rapid and simple and adds as little burden as possible to a busy house staff.

METHOD

Test tubes etched with a line at the 5 ml. level, identical with those in common use for the determination of the prothrombin time, are prepared by adding 0.5 ml. of 50 per cent sulfosalicylic acid. The tubes (blood Clinitest tubes) are fitted with rubber stoppers and kept available on the ward for blood sugar estimation.

In performing the test, 4.5 ml. of freshly drawn venous blood is added to the blood Clinitest tube directly from the syringe. This brings the total amount of fluid, blood and sulfosalicylic acid, up to the etched line. The tube is then stoppered, gently inverted three or four times in rapid sequence and then vigorously shaken until no trace of red color remains. Protein precipitation has been found to be complete when the contents are a dull brown in color, the change taking from one to two minutes of vigorous shaking. The tube is then unstoppered and centrifuged for ten to fifteen minutes. Exactly six drops of water is then added to a clean test tube, care being taken to add the drops vertically so that none of the water runs down the side of the tube. To the six drops of water are added nine drops of the protein-free supernatant. Then a Clinitest tablet is added to the resultant mixture and the tube is gently agitated while boiling is taking place. After a wait of a minute or longer the color is compared to the standard Clinitest urine color chart. Correlations of color changes with total content of reducing substances per 100 cc. of blood has been found to be as follows: Trace, 125 mg.; one plus, 125 to 225 mg.; two plus, 225 to 465 mg.; three plus, 465 to 585 mg.; four plus, 585 mg. or more.

It has occasionally been found desirable to subdivide the rather wide two plus range. This is done rather simply by adding five drops of supernatant to ten drops of water and repeating the test. With this modification the following color correlations are found: one plus, 225 to 325 mg. per 100 cc.; two plus, 325 to 465 mg.

Standardization of the method was carried out with water standards prepared by using standard dextrose supplied by the U. S. Bureau of Standards. The ratio of nine drops of supernatant to six of water is the result of a series of trial and error approximations using glucose water standards in the place of supernatant. This dilution was found to produce the most useful range of values with color changes occurring at points chosen to be of value in the management of acidotic patients. Exacting care as to addition of the proper number of drops was found to be essential if results are to be duplicated. The sugar content of a series of blood specimens from diabetic patients was determined both by the method described and by the hospital clinical laboratory using the method of Kingsley and Reinhold.[3] Blood sugar values varied from 34 to 672 mg. per 100 cc. and a reasonably close correlation

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From the Metabolic Section, Department of Internal Medicine, Veterans Administration Hospital, Los Angeles, and University of California Medical Center, Los Angeles 25.

Submitted May 9, 1958.

TABLE 1.—*Comparison of Blood Clinitest Determinations with Plasma-True Glucose*

Blood Clinitest Reading	Predicated Range of Values (mg. per 100 cc.)	True Glucose (Kingsley and Reinhold Method[3]) (mg. per 100 cc.)
Trace	125 or below	34, 78, 83, 136
One plus	125 to 225	149, 170, 170, 188, 200, 222, 292
Two plus	225 to 465	267, 276, 284, 292, 328, 342, 346, 404, 465
Three plus	465 to 585	346, 353, 445, 448, 506, 540, 584
Four plus	585 or above	610, 672

with the blood Clinitest predictions based on water standards was noted, as shown in Table 1.

DISCUSSION

Many methods to simplify the time-consuming, multiple-step procedures for determining of blood sugar have been devised in an effort to make them useful for bedside or ward use by a clinician caring for a diabetic patient. Without attempting a critical review of the literature, it may be said that none of these methods have come into wide use because of the number of steps involved or the special equipment required. A recent method using glucose oxidase impregnated paper (Tes-Tape®)[6] was tried by the authors but was considered unsatisfactory because of the variability of color reaction and the need for the preparation of serial dilutions. Leonards[4] documented the difficulties in using this product for quantitation of urine sugar, and our own observations using both urine and blood tended to confirm Leonards'.

Of particular interest are two recent communications in the British literature describing a method quite similar to the one herein described.[1,5] With this method a tablet of sulfosalicylic acid eliminates the need for pre-prepared tubes, and a more dilute solution permits filtration. The range of values is restricted, however, to 200 mg. per 100 cc. or less, thus effectively omitting the range which is most significant in the management of diabetic acidosis unless serial dilutions are used.

We have found it useful to perform a blood sugar estimation in the admitting room when the diagnosis of diabetic acidosis is first suspected. The result then accompanies the patient to the ward, where therapy with insulin and nonglucose-containing fluids may be instituted without delay. The use of nonglucose-containing fluids makes the estimation of the blood sugar an excellent guide as to the efficacy of the insulin dosages employed. Glucose is withheld until a definitive reduction in blood sugar has occurred or until the Clinitest indication of sugar content is one plus (125 to 225 mg. per 100 cc.). The protein-free filtrate is also suitable for the estimation of blood acetone,[2] and we have found it desirable to perform this determination in association with blood sugar estimation.

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Social Security Says:

"THERE IS NO PROVISION in the law which permits a refund of social security taxes paid if you do not have enough work under the law to get social security payments."

In other words: Your uncollectable "contribution" goes to charity, and not "insurance."

—*From the Department of Public Relations, American Medical Association*

Dermabrasive Ablation of Acne Scars

ADOLPH M. BROWN, *M.D.*, Beverly Hills

• Dermabrasion offers cosmetic improvement of acne pits and scars, but only well-adjusted patients should be selected for this esthetic improvement. In the dermabrasion operation the deep cup-shaped pits are made shallow by saucerization, for the deep sharp shadows are eliminated as the pits are shallowed. It is the elimination of the shadow effect which is so gratifying to the patient.

Although dermabrasion is a superficial skin operation, it involves dangerous instruments and thousands of minute incisions. The procedure is a surgical operation, whether done in an office or in a hospital. The author performs the operation entirely as a hospital procedure, using pentothal anesthesia with meperidine added in small increments during the operation. Thus the operation may be unhurriedly and meticulously performed.

ANY FACIAL DEFORMITY may be accompanied by a personality defect. Even the pits and scars of acne can be a social and economic handicap. They can be improved cosmetically by *dermabrasion* (a term coined by Rein[3]).

Patients requesting ablation of facial scars should be evaluated as to their emotional state. They may be considered in three classes: Well-adjusted persons, persons with inadequate personalities, and psychotic or prepsychotic persons. The well-adjusted patients desire the treatment for purely cosmetic purposes; they may also mention their desire for social and economic advantage. These patients have clear insight into their problems and are obviously robust and healthy emotionally. Persons with inadequate personalities obviously retreat behind their facial handicap and blame all their inadequacies and dissatisfactions on it. Some of the patients of this order may find a psychic adjustment through the physician's interest and the esthetic improvement which they obtain. Persons of the third classification use their acne scars as rationalization for all their personality, social and economic difficulties, giving the scars an importance completely out of proportion to the disfigurement. To correct the deformities of such patients may merely place them in a position to find something else to blame for their troubles. They may select the physician to hang their difficulties on. But if great care is used in selection of the patients for dermabrasion, great cosmetic and emotional improvement can be obtained.

An acne pit is a depressed scar involving the pilosebaceous ensemble. The pilosebaceous aggregate may be large, small, shallow or deep; the pitted scar, therefore, may vary in size and depth. The acne pits are more or less cup-shaped, usually with steep edges. Under overhead lighting, each of the pitted scars has a shadow under its upper rim. It is this shadow effect which accentuates the scars and draws attention to them.

The abrasion procedure whips away at the pitted scars, removing the dermis with the scarred pilosebaceous units and making the deep cup-shaped pits shallower and saucer-shaped. This eliminates the deep, sharp shadows. Not all the pits are destroyed, however. Some undulation of the cutis remains, but the more or less complete elimination of the acne pit shadow effect is what is so gratifying to the patient.

The development of the dermabrasion technique from Kromyer[1] to Kurtin[2] is well known. Kurtin's innovation is generally thought of in terms of his ingenious motor-driven high-speed wire brush, and the office anesthesia of ethyl-chloride spray. This anesthesia made it possible for dermatologists to perform the surgical procedure in the office, which they at first did timidly and now do with great enthusiasm.

It was the rigidity of the skin brought about by the freezing technique which made it possible to truly abrade the skin with more controlled depth than was possible with the sandpaper or burrs alone formerly used on a yielding field.

Now more operators are using the refrigerating topical anesthetic Freon 114 (dichlorotetrafluorethane) instead of ethyl chloride. Its refrigerating and solidifying properties are good and the exasperating blower noise which accompanied the ethyl chloride technique is eliminated. With its use the operating field is neater. Another advantage is that, unlike ethyl chloride, chance traces in the air do not produce the first stage of general anesthesia—illness of ease and excitement of the patient. A twisting, writhing patient, inadvertently inhaling ethyl chloride, can cause a hazardous surgical situation, for the revolving steel brush or serrated burr is always a potentially dangerous instrument.

Most operators pre-cool the face with the application of a chilled bag of propylene glycol for 15

Submitted October 2, 1957.

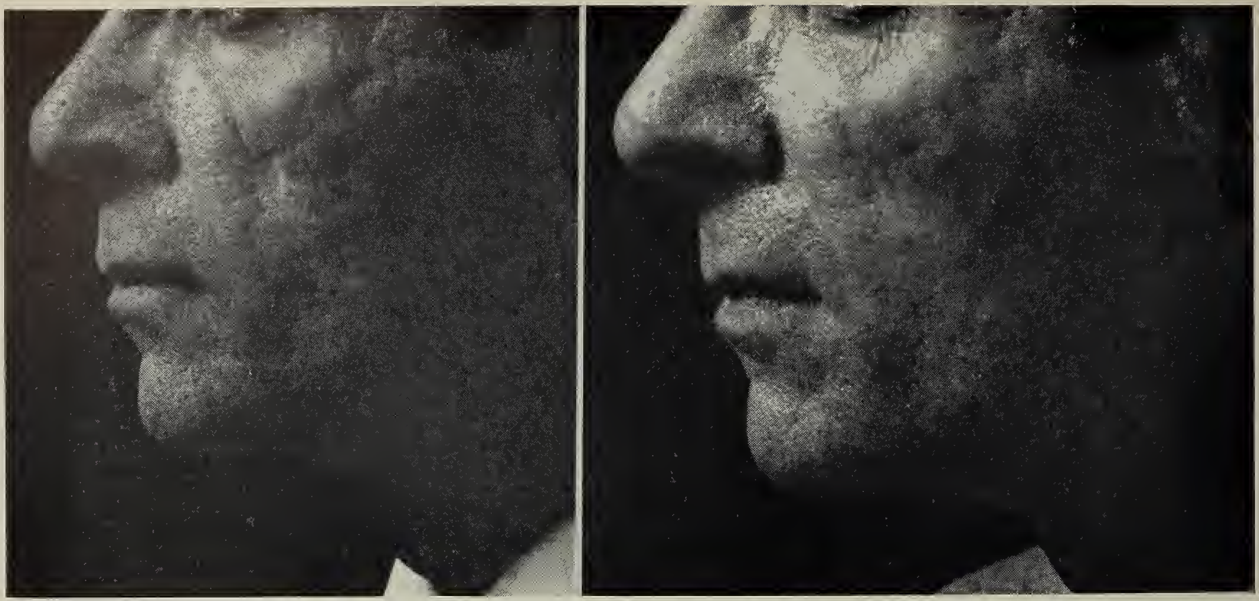

Figure 1.—Acne pits and scars before and after dermabrasion. Lighting factors are constant, with cross lighting to accentuate shadow effect. Deep linear scar on left cheek almost completely ablated.

or 30 minutes on the cleansed skin. The base of each pit is marked with a suitable dye to insure that there will be no skipped areas.

The smoothing of the skin is performed in areas of about two and a half or three inches in diameter at a time. With the patient supine on the operating table, the periphery of the face is abraded first, the abrasive instrument being worked spirally around the rim of the face and forehead. Working from the periphery toward the center prevents capillary bleeding from areas already treated from obscuring the operating field to be dealt with next. Each area is sprayed with a freezing solution, dichlorotetrafluorethane (Frigiderm®). The sprayed area becomes anesthetized for a fraction of a minute during which the skin is rigid and the superficial flow of blood immobilized. The anesthetized area is promptly abraded.

Some surgeons use a stainless steel wire brush that is rotated at 13,000 to 15,000 revolutions per minute by a flexible cable. A serrated burr is also a good abrading instrument. Each area is smoothed by parallel strokes of the revolving brush, the strokes overlapping. Each area may be further cross-hatched with the instrument in particularly pocked areas.

Occasional active lesions are no contraindication for dermabrasion. Scattered lesions such as pustules, either small or of the conglobate type, are no deterrent. During the operation, as the steel wheel whips over the pustular area, the lesion is literally unroofed. The contents spill but this does not seem to hinder the cosmetic improvement nor complicate the convalescence. However, widespread active acne is a contraindication. Dermabrasion is essentially a treatment for the sequelae of acne, not of acne itself.

I make no attempt to stop the bleeding until the entire face is abraded, with the peaks of the villi oozing over the entire face. After the abrading is completed, I clean the entire raw area with hydrogen peroxide liberally doused, brushing away the detritus and epithelial debris thoroughly. Each of the thousands of tiny fragments of free epithelium is a free skin graft in miniature. These grafts "take" easily and promptly wherever they repose upon the face, later forming miliary cysts and epithelial upcroppings which are a source of postoperative annoyance. After the face is cleansed, Telfa®* strips are applied and a pressure bandage is used to cover the entire face. I order all bandages removed after two hours. At that stage the wounds of the face are weeping a plasma-like fluid, and when exposed to the air the exudate begins to congeal, the first sign of the crusting that develops.

About six to eight days after the operation, the thick dark crust begins to crack and fall off. Once the crust begins to disintegrate, removal of it may be safely expedited by soaking the face with warm, moist packs. The skin thus uncovered is pink; an emollient such as cold cream may be safely applied. The patient should be cautioned about premature exposure to the sun.

Usually the patients are gratified by the results and become enthusiastic enough to ask for repeated dermabrasions. Overenthusiasm must be resisted, however, for some patients conclude naively that the skin can eventually be made smooth to the point of

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*An absorptive material that is easy to remove from weeping surfaces.

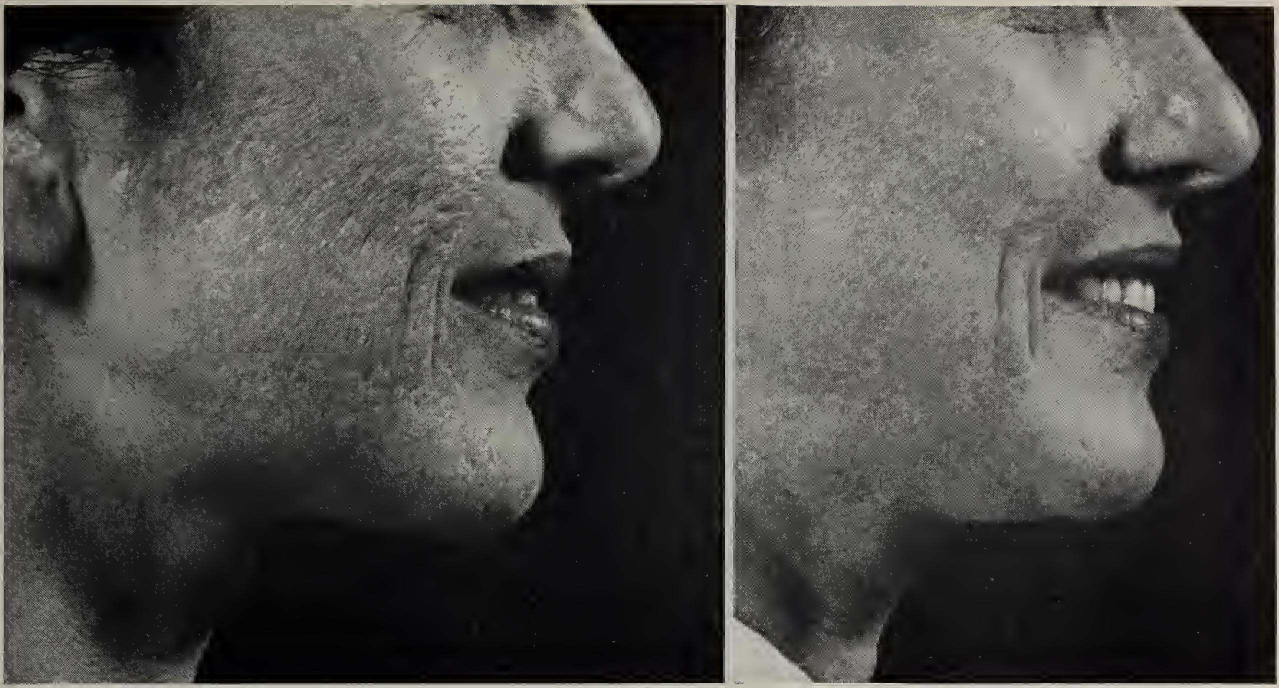

Figure 2.—Typical cosmetic improvement resulting from dermabrasion.

normal. Dermabrasion once is enough for moderate acne pits and scars; for severe cases two or more operations may be necessary. The procedure may be repeated after two months.

The limitations of the procedure must be explained to the patient. Since the "50 to 80 per cent improvement" that has become a cliche of prognosis can be so variously visioned, one should make promises guardedly but with the observation that in all cases the procedure is definitely helpful. It is important, I believe, to explain to the patient that part of the immediate improvement and gratifying smoothness is owing to the edema of mild surgical insult. The slight swelling stretches the saucerized pits, creating an effect so pleasing that the patient hopes it will be permanent.

It is obvious that dermabrasion is a surgical operation, whether the surgeon elects to do it in the office or in the hospital. It opens literally thousands of portals of entry for infection. Further, it is an esthetically brutal procedure; some squeamish patients are quite disturbed during the procedure and alarmed immediately afterward despite reassurances.

I do the operation entirely as a hospital procedure. Urinalysis and blood cell count are done beforehand and clinical photographs are taken. The anesthesiologist visits the patients soon after they arrive at the hospital and orders the premedication to fit the weight and temperament of each patient.

A patient who is particularly apprehensive may enter the hospital the afternoon before operation so that sedation may be started and a quiet night's sleep assured. Generally used for this purpose is sodium pentobarbital, 0.1 gm. (grains 1½) by mouth and promethazine hydrochloride 0.25 mg. by mouth for patients weighing 120 to 150 pounds, two hours before operation 0.2 gm. of pentobarbital sodium is given, then an hour before operation the following: 0.3 mg. of scopolamine and either 15.0 mg. of morphine or 75 to 100 mg. of meperidine hydrochloride (Demerol®). With this preparation the patient is completely relaxed, dozing and tranquil upon entering the operating room. There the left arm is prepared for intravenous fluid administration at once.

Since the purpose of the operation is to eliminate the shadows of acne pits, the operating room lamp is placed directly over the head of the patient so that there are shadows under the eyebrows and under the chin. This accentuates the shadow effect of each acne pit. As soon as intravenous inflow is established, Demerol is added in small increments until the patient is barely asleep, and then administration is continued in small increments during the operation. Never is more than 100 mg. of Demerol given intravenously in the course of the procedure. Thiopentothal sodium (Pentothal) is added as necessary in a 3 per cent solution to keep the patient quietly asleep. The patient is also kept asleep during the cleansing phase of the procedure. Wiping the face clean with peroxide-soaked sponges is unusually painful and irritating otherwise. The temporary Telfa and pressure bandage is then applied and the patient is permitted to awake. Most patients are astonished that the operation is finished; "Oh, I was waiting for you to begin" is a usual comment.

After two hours the bandages are removed entirely and the patient is discharged from the hospital about 12 hours later. Acetyl salicylic acid is given for facial discomfort after the operation, and for three days after the operation, 0.1 gm. (grains 1½) of sodium pentobarbital is taken at bedtime.

By consideration of the dermabrasion operation as a surgical procedure, to be carried out with the help of a good anesthesiologist, the operator gives the patient the benefit of the latest and safest techniques available in pain repression. The operation may be done more carefully, too, with an anesthesiologist on hand to keep the patient in a state of maximum comfort and safety. Larger scars may be safely excised in this environment; meticulously and unhurriedly, with a careful plastic repair. The incisions may be lightly brushed, to spread the epithelium evenly over the repaired area.

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For Your Patients—

A Personal Message to YOU:

As your personal physician I consider it both a privilege and a matter of duty to be available in case of an emergency. But, being only human you can understand that there are times when I may not be on call. I might be at a medical meeting outside the city, on a bit of a vacation—or even ill.

Consequently, I thought it would be a good precaution if—on this gummed paper which you can paste in your telephone book or in your medicine cabinet—I listed numbers where I can be reached at all times. Also, the number of a capable associate as an added service. Here they are:

OFFICE	HOME	MY DOCTOR
OFFICE	HOME	ASSOCIATE

1856

Sincerely,

____________________________, M.D.

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Congenital Dislocation of the Hip

A Study of Open Reduction After Failure of Conservative Treatment

JAMES ROCHE, *M.D.*, and FREDERIC W. ILFELD, *M.D.*, Beverly Hills

• In a study of 42 cases in which open reduction of congenital dislocation of the hip was carried out after conservative treatment had failed, the following observations were made (in a relatively short period of follow-up observation):

No one pathological change, as observed at operation, was inordinately associated with failure of closed reduction.

By far the highest incidence of successful results of open reduction was obtained in cases in which the operation was done in the second and third year of life.

The highest incidence of successful operation, as appraised immediately after the procedure, was in patients more than one year and less than six years of age.

Results as determined roentgenographically were in close agreement with results observed clinically.

IN SPITE OF EARLY, intelligent and persistent conservative treatment of congenital dislocation of the hip, failures of closed reduction still sometimes occur. Why is this so? What is the next step after failure becomes apparent? Should open reduction be done without delay or would it be better to wait? Is there an optimum time for operation? What are the results of operation?

In search of answers we reviewed the records of 42 patients operated upon at the Children's Hospital, Los Angeles, from 1934 to 1956. Thirty-three of the patients were female and nine male. In 21 cases both hips were dislocated, in 28 cases one hip; the total number of hips treated being 49. The average age at diagnosis was 23 months, 18 months in the unilateral group (since the deformity was more evident) and 32 months in the bilateral. The average age of patients at operation was 38 months; the lowest age was seven months and the highest almost ten years. There were no serious complications and no operative deaths.

Closed reduction was tried at least once and often several times before open operation was carried out. No harm from these procedures was observed. In most cases traction also preceded operation. The anterofemoral incision of Smith-Petersen gave adequate exposure.

The pathologic changes observed at operation were complex. All the structures of the hip were involved in varying degrees. There seemed to be no single pathological entity constantly associated with failure of closed reduction. Extracapsular conditions noted were adductor shortening, adhesions of capsule to ilium, pronounced anteversion of femoral neck, thickened redundant capsule and iliopsoas shortening. Conditions observed within the joint were of pericapital adhesions, abnormalities of the femoral head, annular constriction of capsule, enlarged ligamentum teres, inverted limbus, fibro-fatty tissue in the acetabulum and shallow acetabulum.

In 36 of 49 operations, the dislocation was successfully reduced. In the remaining 13 instances, dislocation occurred again immediately after operation or in the postoperative period before removal of the cast. From analysis of these 13 immediate failures it appeared that the age of the patient was an important factor—that the best chance for immediate successful operation was in patients over one year and under six years of age (see Chart 1).

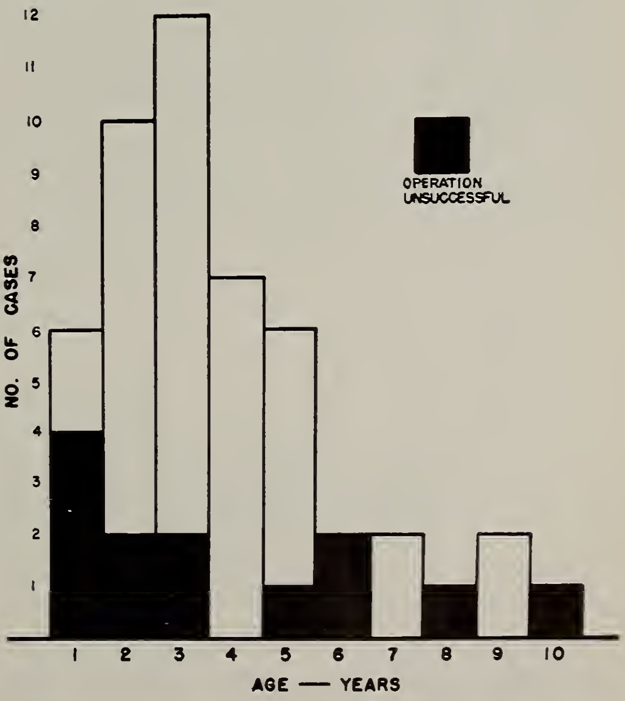

Chart 1.—The best chance of immediate successful operation appeared to be when the patient is over one year and under six years of age.

Submitted February 26, 1958.

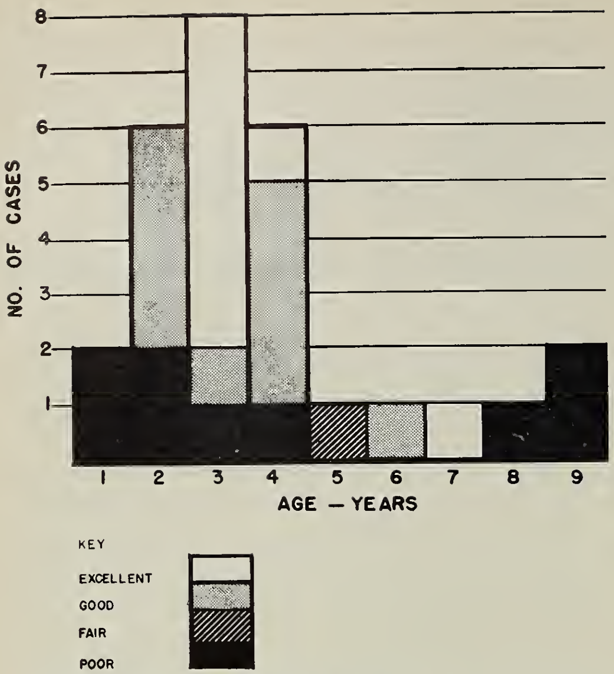

Chart 2.—The best results as observed in x-ray films occurred when operation was done in the third year of life.

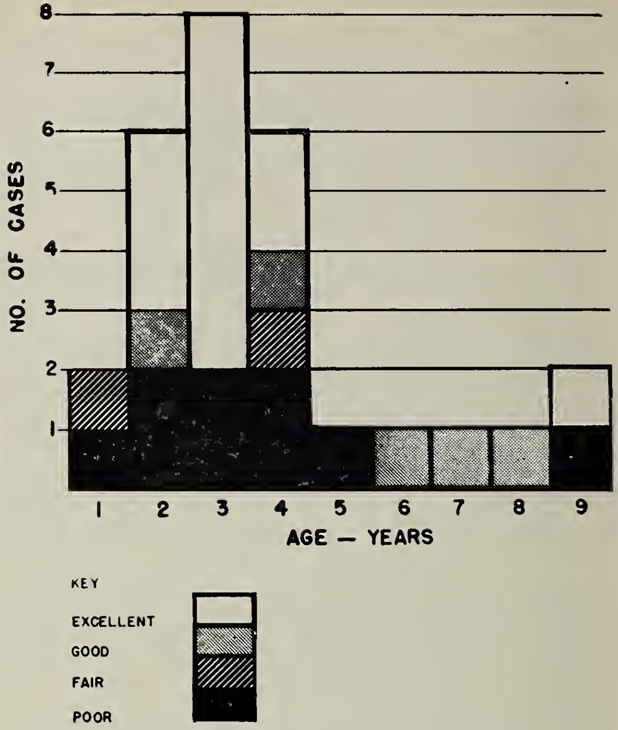

Chart 3.—The best clinical results occurred when operation was done in the second and third years of life.

Personal continuing observation was possible in 28 instances (including some cases in which both hips were involved). The average length of follow-up was more than five years and in no case less than 15 months. It is recognized that this is a short term follow-up.

Roentgenographically the results in eight cases (30 per cent) were excellent—the hip was of normal appearance. In ten cases (35 per cent) the result was good—slight deformity or dysplasia was noted in four cases (15 per cent) fair, subluxation being observed. In six cases (20 per cent) the operation was a failure, with either dislocation or fusion observable in x-ray films. The best results as determined by x-ray films were obtained in cases in which operation was done in the third year of life; the poorest in operations on patients under one year and over four years of age (see Chart 2).

Twelve of the patients (40 per cent) had no clinical complaints on follow-up examination. Six (20 per cent) had a good result, with slight discomfort or limp; one had a limp and pain. In nine cases (33 per cent) the operations were considered failures. The clinical results (Chart 3) paralleled the results as observed roentgenographically. The best clinical results occurred when operation was done in the second and third years of life.

436 North Roxbury Drive, Beverly Hills (Ilfeld).

Social Security Footnotes

Every argument which has ever been used to support Social Security can be used with equal validity to support socialized medicine by changing a few words. If you ask for the one, prepare to get both. It is planned that way.

—From the Department of Public Relations, American Medical Association

"Hidden" Alcoholics

Medical Implications of Undiscovered Addiction

PAUL O'HOLLAREN, *M.D.*, and WAYNE M. WELLMAN, *Ph.D.*, Seattle

• "Hidden alcoholics"—those who drink surreptitiously to keep their addiction secret—far outnumber the overt habitues of skid rows. The former rather than the latter should be considered "typical" alcoholics. Even though they have severe problems, they maintain fairly good employment stability and stability in marriage. Yet they steadily deteriorate.

Often "hidden" alcoholics go to physicians because of symptoms referable to alcoholism but contrive to conceal their addiction and so make diagnosis difficult. Hence, physicians observing certain kinds of symptoms that cannot be attributed to a readily observable or demonstrable pathologic change should make searching inquiry as to the patient's drinking habits. For not until the proper diagnosis is made in such cases can there be hope of effective treatment.

THE "hidden alcoholic" is one who is able to conduct his life in such a manner as to maintain a reasonable semblance of normality in the areas of marital, social and occupational behavior. The general public thinks of an alcoholic as being quite unstable, unemployed and usually as being on skid row. The hidden alcoholic appears to be a reasonably stable person, employed and, for all outward purposes, able to conduct his life in a normal manner. The fact that he is able to keep his addiction hidden is due not only to public misunderstanding of alcoholism, but also to his surreptitious drinking pattern which is designed to enable him to drink without detection by friends and employers. The hidden alcoholic, aware of social values and pressures for economic security, will hide excessive drinking by drinking alone.

The most recent publication estimating the prevalence of alcoholism was made in 1953. The study indicated that there were 4,589,000 alcoholics in the United States, 4,884,000 men and 705,000 women.[2] This means that one of every 13 men (drinkers and non-drinkers) 20 years of age and older in the United States is an alcoholic. Not more than 7 per cent of these four and a half million alcoholics are on the skid rows of America. Only about 6 per cent of the total number of alcoholics is to be found seeking or receiving aid in out-patient clinics or hospitals or in affiliation with Alcoholics Anonymous.[8] Where are the remainder? The answer seems to be that they are "hidden"—hidden from general recognition.[8]

These statistical data were brought out through analyzing the marital and occupational stability of a sub-group of alcoholics at Shadel Hospital, Seattle,[8] and comparing the information about these alcoholics with similar information about other subgroups of alcoholics.

The patient sample from our experience used in this study consisted of 830 male former alcoholics, and the results were compared with studies completed in 1942 by Bacon,[1] in 1944 by Malzberg,[3] another study in 1948 by Malzberg[4] and a study completed in 1950 by Straus and Bacon.[7] Table 1 shows the comparisons made regarding the marital status of these male alcoholics.

It can be seen from this table that the patients studied had a relatively high degree of marital stability—less than in the general population, but certainly higher than might have been expected of alcoholics.

Occupational comparison was made between the patient sample of 830 male former alcoholics[8] and Straus' and Bacon's 1950 sample of 2,023 male alcoholics.[7] (See Table 2 for these comparisons.)

A large proportion of the alcoholics, who had a wide variety of job classifications, had occupational stability. More than 40 per cent of the patients in the group studied were engaged in top-level jobs, management and private ownership, while only 3 4/10 per cent were unemployed. Both the present group and that reported upon by Straus and Bacon represented a distinct alcoholic sub-group; it is not implied that they were representative of alcoholics in general. While it cannot be inferred that the same proportion of marital and occupational stability would be found in all alcoholics, it would seem logical to assume that a vast majority of alcoholics do have a considerable degree of stability in their marriages and on their jobs and that only a small proportion are on skid row, the remainder being in the "hidden" category. To say that hidden alcoholics have a high degree of marital and occupa-

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Submitted March 27, 1958.

TABLE 1.—*Marital Status of Male Alcoholics in Five Studies**

	Comparative Data (in Per Cent) of Five Studies				
Marital Status	Conn. Arrested Inebriates (1,023)†[1] (1,223)	New York Alcoholics With Psychosis[3] (516)	New York Alcoholics Without Psychosis[4] (309)	Clinic Patients (2,023)[7]	Sanatorium Patients (830)[8]
Single	53.1	36.4	22.0	17.0	7.8
Married	22.9	38.8	58.9	53.0	68.9
Separated	11.5	10.3	6.1	15.0	4.6
Divorced	7.5	3.4	6.1	12.0	16.5
Widowed	5.0	10.3	5.5	3.0	2.2
Unascertained	....	0.8	1.3	....	....
Totals	100.0	100.0	99.9	100.0	100.0

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*Table 1 is reprinted from Wellman, Maxwell and O'Hollaren, "Private Hospital Alcoholic Patients and the Changing Conception of the 'Typical' Alcoholic," Quart. J. Stud. Alc., 1957, Vol. 18, No. 3, p. 391, by permission of the publisher and authors.[8]

†The numbers in parentheses are the numbers of patients observed in the studies.

TABLE 2.—*Occupational Classification of Clinic and Private Sanatorium Patients (in Per Cent)**

	Clinic Patients[7]	Sanatorium Patients[8]
Major-minor official, manager, owner	14.0	40.9
Professional	6.0	6.5
Public servant	7.0	1.3
Clerical	6.0	2.6
Salesman	10.0	9.7
Skilled labor	23.0	9.5
Semi-skilled labor	16.0	17.6
Unskilled labor	17.0	5.0
Other	1.0	6.9†
Totals	100.0	100.0

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*Table 2 is reprinted from Wellman, Maxwell and O'Hollaren, "Private Hospital Alcoholic Patients and the Changing Conception of the 'Typical' Alcoholic," Quart. J. Stud. Alc., 1957, Vol. 18, No. 3, p. 395, by permission of the publisher and authors.[8]

†Includes retired (1.9 per cent), unemployed (3.4 per cent), and no response (1.6 per cent).

tional stability does not imply that they do not have difficulties in both areas. The implication is only that they do not evidence this instability to the degree that has been considered characteristic of typical alcoholics.

An alcoholic of this type is able to conceal his drinking from employers, friends and oftentimes even his family physician. He may complain of various symptoms that are a direct result of excessive drinking, yet in no way indicate to the physician the extent of his addiction.

IMPLICATIONS TO THE MEDICAL PROFESSION

In light of data on the prevalence of alcoholism and the recent indications of drastic change in the general description of the typical alcoholic, it seems logical to point out the following factors:

1. Alcoholism is a major medical problem.

2. Approximately 6 per cent of the total alcoholic population is receiving treatment of some type. It is certain that the vast majority of alcoholics have physiological symptoms as a result of their alcoholism. Many of them must be under medical care for these symptoms but have not yet been discovered to be alcoholics. Physicians are treating alcoholics in many cases without the benefit of realizing they are alcoholics.

3. Because of the "hidden" alcoholic's compulsive need to keep his addiction hidden, he will usually not report to a physician the full extent of his drinking or the effect that alcohol has on his general health. In such cases, the importance of obtaining an accurate history of the patient's characteristic response to alcohol cannot be overemphasized. Where hidden alcoholism is suspected, the physician should carefully check the history of the patient with the spouse or some other member of the immediate family.

If a positive history of hidden alcoholism is obtained, the patient should be confronted with the diagnosis and advised to face the problem and the need for treatment.

4. Because of the popular misconception of the "typical" alcoholic, physicians are failing in many cases to recognize alcoholism as the underlying cause of physical symptoms.

Hence it would seem helpful to review symptoms that characteristically arise as a result of excessive drinking.

CHARACTERISTIC PHYSICAL CHANGES

The facial appearance is the first area affected overtly by alcoholism. The capillaries around the conjunctiva of the eye become engorged.[5] However, the physician may not associate this condition with alcoholism, since in most instances an alcoholic who goes to a physician for treatment of illness will take care not to appear under the influence of alcohol. More commonly, a puffy, edematous appearance is noted in the skin and subcutaneous tissue of the face and forehead; and, as alcoholism continues and there are repeated episodes of drinking, this facial edema eventually leads to the development of deep grooving at the corners of the eyes as well as throughout the skin of the forehead, face and cheeks.[5] In persons with fair complexion, flushing of the skin is common, with pronounced hyperemia which after a long period develops into "whiskey nose."[5] Edema may also be observed in the nasal mucous membrane, the posterior pharynx and extending into the larynx and the vocal cords—the latter causing the hoarseness so prevalent in overt alcoholism.

Alcoholic tremor is one of the most common of physical changes associated with prolonged excessive drinking; and the tremor may persist long after the patient has ceased to drink. The tremor is aggravated when the patients attempts to stop drinking and is temporarily relieved by further ingestion of alcohol.

There seem to be no physical changes in the heart or lungs or in the abdomen or lower extremities which could be considered typical of alcoholism.[5] However, a bounding pulse and moderately severe tachycardia is very common during withdrawal from alcohol.

Perhaps the most common form of pathologic change in the stomach is alcoholic gastritis, which is manifested by loss of appetite, frequent periods of nausea and occasional vomiting following a drinking episode. Blood in the vomitus, gross or occult, is often found. Evidence of irritation of the lower intestinal tract may be noted—either obstipation or severe diarrhea.

DISCUSSION

"Only by gathering more information as to why some individuals are more sensitive to alcohol than their social drinking friends, and by developing techniques and indices whereby such individuals can be detected and singled out from others, can we hope to save many persons from reaching the advanced stages of alcoholism."[6]

Until such a diagnostic tool is available, the medical profession should remain constantly alert to the scope and characteristics of alcoholism so that a more accurate medical diagnosis can be made and treatment rendered to the "hidden" alcoholic.

7106 35th Avenue, S.W., Seattle 6 (O'Hollaren).

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Preparation for Disaster

What the Individual Medical Society Can Do

WAYNE CHESBRO, *M.D.*, Berkeley

• Standardization of county medical society plans for dealing with casualties in disasters would greatly facilitate integration with the state Civil Defense organization.

Without such plans there can be no hope of coping with the great number of casualties that would come should this area be attacked.

The plan of the Alameda-Contra Costa County Medical Association herein described, has been tested in actual emergency and has been found effective.

TODAY, perhaps as never before, the medical profession must prepare adequate medical and health services for disaster. Such services are our responsibility to the communities and the counties we serve.

The misconception that "because we are too small to be a target city, there is no need for effort in disaster planning" must be rejected. No hamlet or metropolis is immune to disaster created by nature's forces or caused by rapid transport by rail, highway or air. In addition, we must recognize the potential disaster problems created by suburban industrial expansion and its most recent family member with its particular health problems—the nuclear reactor. Even epidemic disease, despite all our efforts with antibiotics and immunization procedures, still holds the threat of a mutant that can bring about disaster for thousands.

These points are mentioned so that medical societies of limited membership serving small communities will recognize the necessity for disaster planning. (Witness the worthwhile effort in disaster preplanning of the small parish medical society of southern Louisiana which delivered medical care to all under extremely adverse conditions during the devastating hurricane "Audrey" last summer.)

A medical society in order to adequately prepare for disaster must follow, I believe, certain basic steps:

1. *The appointment of a Disaster Committee.*

The area which a society serves and the membership of a society may determine the appropriate number appointed to this committee. Perhaps a small group of five to begin with, picked for genuine interest in their assignment. It will help if some of the members have had World War II or Korean War combat experience, for there is no better certification for medical disaster work than that of actual participation.

2. *Include local Civil Defense officials.*

One or more active public-appointed civil defense officials (local or county coordinators) as ex-officio members of the committee should be included. Thus an immediate and permanent working liaison is established between existent civil defense planning and resources and medical society planning.

3. *Objective.*

It will be the objective of the society through this committee to provide adequate medical and health services disaster planning for all of the communities it serves. This can be accomplished by the following:

(a) The stimulation of all hospital staffs to designate disaster committees.

(b) The formulation of disaster planning for large-scale local disaster on a command-coordination level of the society for all the area which the society serves.

(c) The formulation of disaster planning for total disaster based on inter-society, state medical association and civil disaster planning on a local area, state and national level.

We would do well to take each of these segments of the objective for discussion in turn and define them more clearly. First, the Hospital Disaster Committee. Each hospital staff should appoint such a committee, which should immediately survey the hospital relative to its physical and material resources and its possible expanded bed capacity. The availability of the staff at all hours should be considered and an estimate should be made of the numbers of additional physicians and nurses that would be needed in event of expansion to the greatest possible number of beds. A copy of these data should be filed with the society's Disaster Command Post. A walk through the hospital is often enough to determine the most suitable unloading area, triage and first aid areas, the availability of central supply, the proper pathway and policing to maintain patient flow, the adequacy of communication and informa-

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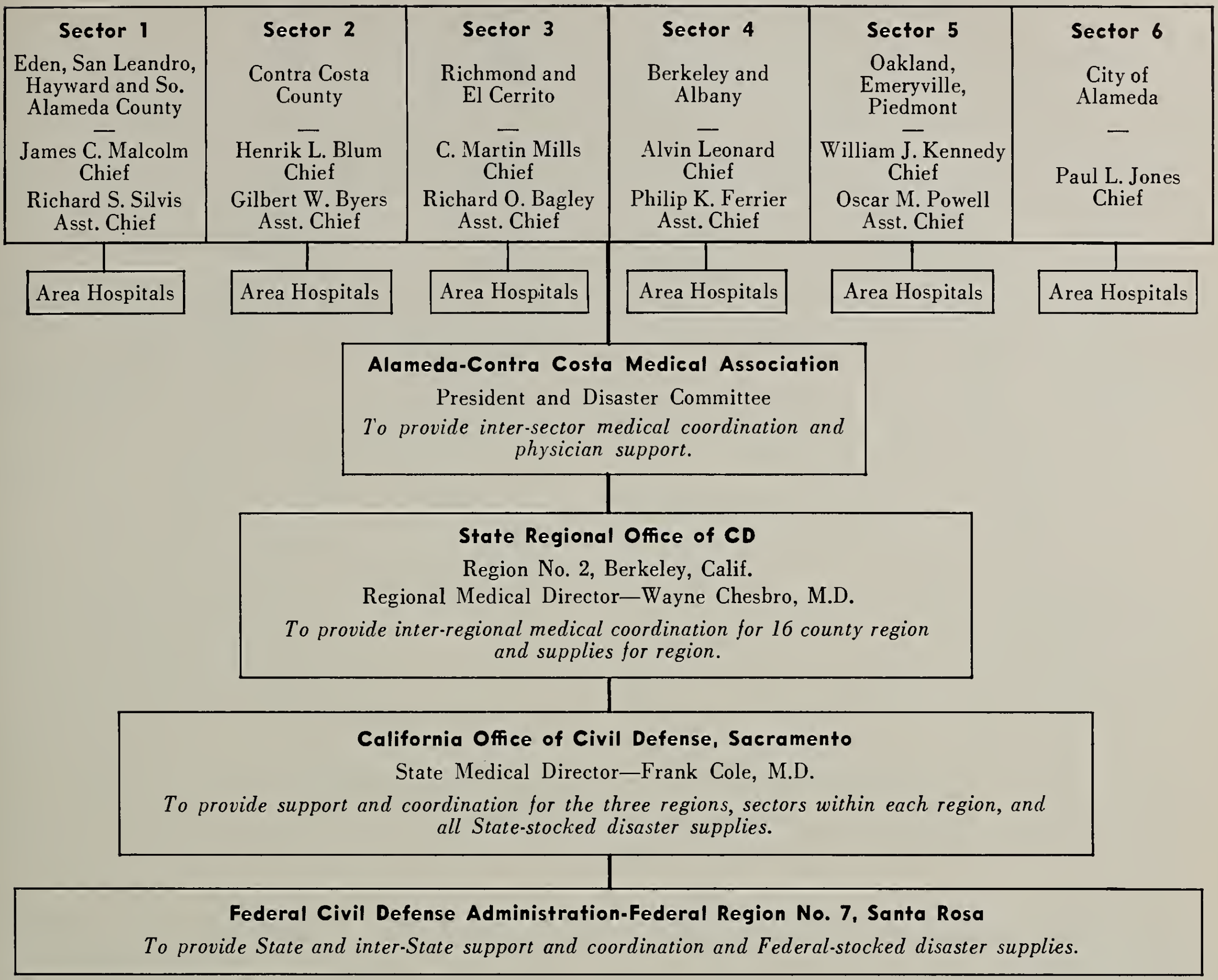
Submitted January 2, 1958.

Chairman, Alameda-Contra Costa Medical Association Disaster Committee.

Chart 1.—Integration of the six Alameda-Contra Costa Sectors with over-all disaster organization


Sector 1
Eden, San Leandro, Hayward and So. Alameda County
James C. Malcolm Chief
Richard S. Silvis Asst. Chief
Sector 2
Contra Costa County
Henrik L. Blum Chief
Gilbert W. Byers Asst. Chief
Sector 3
Richmond and El Cerrito
C. Martin Mills Chief
Richard O. Bagley Asst. Chief
Sector 4
Berkeley and Albany
Alvin Leonard Chief
Philip K. Ferrier Asst. Chief
Sector 5
Oakland, Emeryville, Piedmont
William J. Kennedy Chief
Oscar M. Powell Asst. Chief
Sector 6
City of Alameda
Paul L. Jones Chief
Area Hospitals
Area Hospitals
Area Hospitals
Area Hospitals
Area Hospitals
Area Hospitals
Alameda-Contra Costa Medical Association
President and Disaster Committee
To provide inter-sector medical coordination and physician support.
State Regional Office of CD
Region No. 2, Berkeley, Calif.
Regional Medical Director—Wayne Chesbro, M.D.
To provide inter-regional medical coordination for 16 county region and supplies for region.
California Office of Civil Defense, Sacramento
State Medical Director—Frank Cole, M.D.
To provide support and coordination for the three regions, sectors within each region, and all State-stocked disaster supplies.
Federal Civil Defense Administration-Federal Region No. 7, Santa Rosa
To provide State and inter-State support and coordination and Federal-stocked disaster supplies.

tion centers, the alerting schedule, the adequacy of laboratory facilities, improvised blood bank area and morgue facilities, and, of course, the adequacy of the physical plant of the hospital itself as to water supply, food, auxiliary power and heat. I would emphasize the foregoing strongly. The hospital facilities should be reviewed and all members of the Disaster Committee should be familiar with them. Disaster might strike before the disaster plan is written.

Following such a survey the committee will do well to write out a simple disaster plan involving three phases:

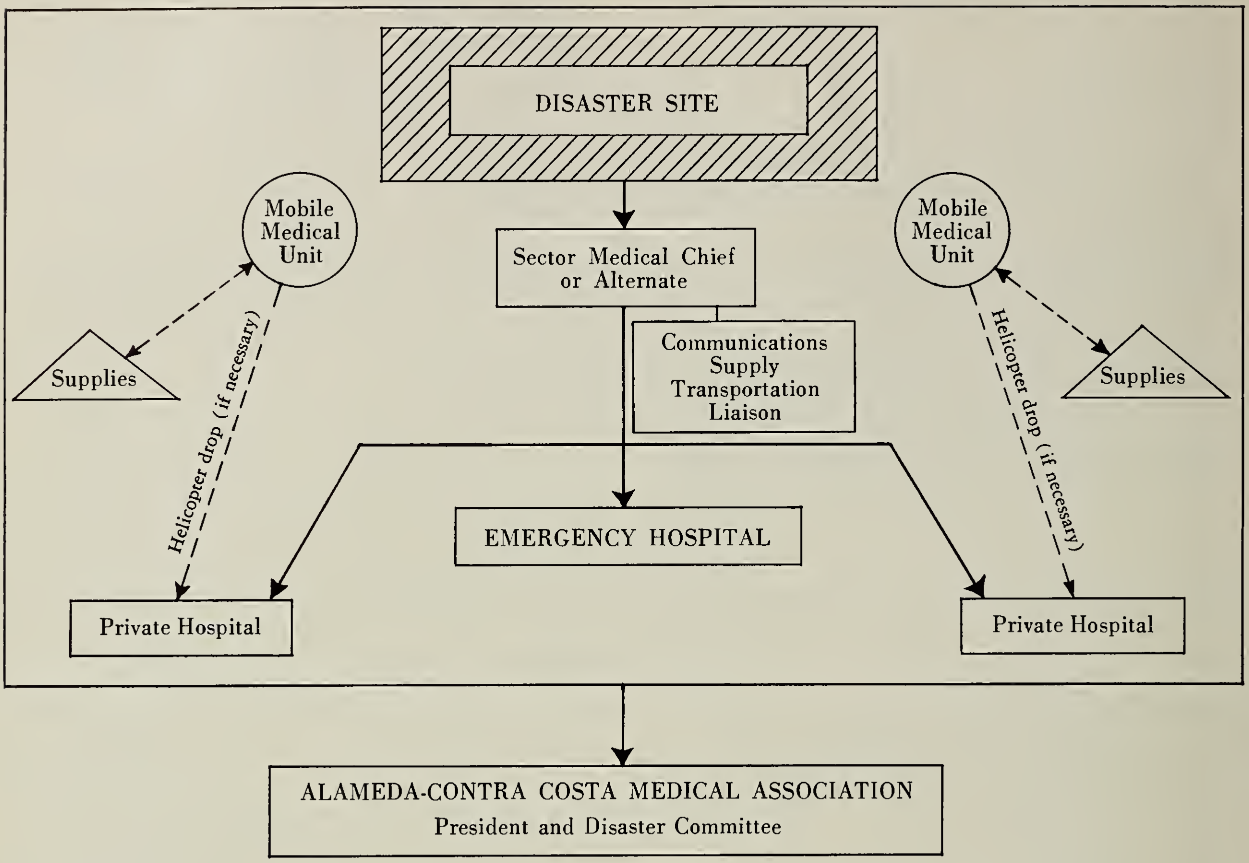
1. Hospital disaster planning for disaster within the hospital itself. (Has your hospital ever carried out even a simple fire drill?)

2. Hospital disaster planning for large-scale local disaster.

3. Hospital disaster planning for total disaster in which the hospital may have to cope with one of two situations: Either it remains standing and functional or it has moved its facilities and personnel to a peripheral area and must now reassemble as a group to work under entirely different circumstances than previously existed.

It is the duty of the medical society Disaster Committee, whose members are also members of the respective hospital staffs, to stimulate such a program and work with hospital Disaster Committee members. Too often hospital planning will collapse because of lack of interest. Interest can be maintained by medical society-hospital sector trial exercises. After adequate trial exercises have been carried out and a monitor from the medical society has found the hospital has adequate personnel and facilities to meet disaster, the society should give the hospital a certificate to that effect.

The second objective of the medical society should be to formulate disaster planning for large scale disaster in the area encompassed by the society, especially to delineate functions of the medical society at the command and coordination level for use in times of disaster. The existing civil defense organization is based on self help and mutual support; hence this concept should be carried out in all plans, Chart 2.—Organization applicable to each of the six disaster sectors of Alameda-Contra Costa counties in a local disaster


DISASTER SITE
Sector Medical Chief or Alternate
Communications
Supply
Transportation
Liaison
Mobile Medical Unit
Supplies
Helicopter drop (if necessary)
Mobile Medical Unit
Supplies
Helicopter drop (if necessary)
EMERGENCY HOSPITAL
Private Hospital
Private Hospital
ALAMEDA-CONTRA COSTA MEDICAL ASSOCIATION
President and Disaster Committee

No medical personnel will move into a disaster area unless requested by that Sector's Medical Chief or Alternate at the disaster site.

The Sector Medical Chief or Alternate is in full command of all medical services in the Sector in which the disaster occurs.

Helicopter service for medical use may be ordered only by the Sector Chief or Alternate. Such order must be transmitted directly to the Chairman of the ACCMA Disaster Committee at Association Headquarters.

In event of disaster in Alameda or Contra Costa county, a Mobile Communications Unit from the Oakland CD Office is immediately attached to the ACCMA Headquarters for direct communication with the Medical Chief or Alternate on the disaster site.

from the smallest unit upward, in all planning within the society's jurisdiction.

In general each county society, with its own geographical peculiarities considered, would do well to divide its area into sectors, each sector having a unit able to cope independently with the immediate disaster within its area, yet able to obtain (and to give) through the society Disaster Committee command post, mutual aid of other sectors and to have access to additional resources on request by the medical chief of the sector. (Chart 1 shows the divisions and the chain of communication for the Alameda-Contra Costa County Medical Association.)

Coping with the medical aspects of the immediate effect of disaster within a sector of the society's jurisdiction is directed by the sector chief of medical and health service, whose duties embrace the local coordination of all medical resources within his jurisdiction in order that casualties can be handled by an effective authority. He shall represent the president of the medical society at the disaster site and shall be sufficiently experienced by study and planning to know all the medical resources within his command. He shall be the authority for the transmittal of requests for additional physicians, nurses and medical supplies to the disaster site, and he shall transmit such requests as well as requests for additional hospital beds outside his sector to the medical society command post for disposition. The sector chief and his alternates will be appointed by the medical society with the concurrence of the chiefs of the Hospital Disaster Committees in each sector. (Chart 2 shows the plan for Alameda-Contra Costa County.)

In order to form an effective unit for disaster preparedness, there must be close cooperation and planning between the sector chief, his alternates and all medical facilities and civil defense organizations in his jurisdiction.

A medical society must define the criteria to be observed in determining when to sound an alert for a large-scale local disaster. In the Alameda-Contra Costa County program it has been agreed that a casualty load of 25 cases of a kind requiring treatment in a hospital is sufficient reason to alert the headquarters command post of the medical society, in addition to notification of functionaries in lower echelons. In such instances the alerting procedure is as follows:

1. The police of the respective city area, or representative of the sheriff's office or highway patrol at the scene of the disaster shall immediately

(a) Make a rough estimate as to the number of casualties and the major contributing force, such as explosion, fire, crash, immersion. This information is immediately relayed to the central radio control room of the police force concerned.

2. The central radio control room

(a) Requests dispatch of an estimated number of ambulances to the scene of disaster.

(b) Notifies the appropriate sector chief of the Medical and Health Services or one of his five alternates.

(c) Notifies the hospital within the sector jurisdiction.

(d) Notifies the County Medical Society headquarters command post.

There can be many variations of the basic plan here outlined, as long as a definite chain of authority is designated and responsibilities assumed. Two disasters have been dealt with under the Alameda-Contra Costa plan, and it was (to use a numerical gauge) at least 85 per cent effective.

The third objective of a medical society—namely, planning for total disaster—is more difficult. However, proper study and conference with Civil Defense officials will bring about at least a current working knowledge of the basic concepts for survival. It is well recognized that our medical resources of today would be greatly limited in case of nuclear attack. Yet planning will help toward making the best possible use of the reduced resources for dealing with mass casualties.

Medical planning against total disaster, especially here in California, cannot hope to cope with the aftermath problem until such time as every county medical society has mastered the basic problems of disaster preparedness for large-scale local disaster. With total participation of all medical societies in adequate disaster planning, followed by coordination of these facilities as a whole, we can at least offer some hope for medical care after a total disaster. With total participation of medical societies in planning against disaster, we can have a uniform plan of action, operating under our own California Medical Association, whose function should be the coordination of maximum medical effort with existing Civil Defense organizations. However, until all county medical societies have adequate disaster planning, any planning done by the Medical Service of the California Disaster Office must be largely theoretical.

Hence it is urgent that all county societies at least enter the phase of pre-disaster planning, which will lead to the planning and training that will add the medical factors to other means for survival (in addition to the armaments of defense) should this nation be attacked with nuclear weapons.

Alameda-Contra Costa Medical Association, 6230 Claremont Avenue, Oakland 18.

Social Security Footnotes

How HIGH will the social security tax go? No one knows. But in South America some countries are paying tax rates as high as 25 per cent of payroll. In France, the tax rate is 35 per cent of much of their payroll and is one of the principal reasons for the failure of the French economy to make a postwar comeback.

—From the Department of Public Relations, American Medical Association

CASE REPORTS

Milk-Alkali Syndrome, with Jaundice And Tetany

ABRAHAM A. GOETZ, M.D., Sunnyvale

A NEW CLINICAL ENTITY, simulating hyperparathyroidism, was reported in 1949 by Burnett and coworkers.[5] This condition, which has come to be known as the "milk-alkali syndrome," follows prolonged and excessive consumption of milk and absorbable alkali, and is characterized by hypercalcemia (generally without hypercalciuria or hypophosphatemia), calcinosis resembling band keratitis and renal insufficiency. Although the occurrence of this syndrome may be more common than is generally realized, only 39 cases have been reported. Because of the prominence of concomitant complaints referable to gastric ulcer, symptoms of the milk-alkali syndrome could seem of secondary importance to those of the gastrointestinal tract. Nausea and vomiting may increase, accompanied by anorexia, loss of weight, constipation, muscular weakness, pruritus, polyuria and polydipsia. Upon physical examination, dehydration, pallor, malnutrition and hypertension may be noted; and occasionally pruritic cutaneous nodules and skin pigmentation are observed. Although calcific deposits can be widespread, as in any hypercalcemic state, the presence of ocular calcinosis is a feature found in nearly all the reported cases of milk-alkali syndrome. The lesions of the eye are of two types. The corneal lesion consists of hazy grayish deposits, running concentrically with the limbus on either the nasal or temporal side, or both. In the conjunctiva, small glass-like particles may be found in the palpebral fissure area.[28]

The case reported here is, with a few exceptions, characteristic, and serves to demonstrate the difficulties that may arise in diagnosis.

REPORT OF A CASE

A 50-year-old white man was admitted to hospital on August 19, 1956, with main complaint of vomiting of five days' duration. One week before, he had been given prednisone because of complaint of pain in the lower back. Increasing weakness, mental confusion and muscular twitching was reported.

For more than 15 years the patient had had postprandial and nocturnal epigastric pain, distention, eructation and sour regurgitation, which was relieved by taking 2 tablespoonsful of sodium bicarbonate. During the preceding six months, he had noted increasing frequency and nocturia. For relief of gastrointestinal distress he had drunk three to four quarts of milk daily and three 8-ounce boxes of sodium bicarbonate weekly.

Upon physical examination the patient was observed to be disoriented and apparently chronically ill. The extremities were twitching and they moved in a coarsely tremulous manner. The skin was slightly icteric with no excoriations. The blood pressure was 180/110 mm. of mercury. The sclerae were icteric, and there were granular deposits concentric with the limbus on both the nasal and temporal sides of the eyes. The edge of the liver, palpated 3 cm. below the right costal margin, was not tender. Besides the muscle twitching, Trousseau's and Chvostek's signs were present and deep tendon reflexes were increased.

The urine had a specific gravity of 1.012 to 1.014, an alkaline reaction, a 2-plus to 4-plus reaction to a test for albumin, 5 to 8 leukocytes per high power field, occasional erythrocytes, and granular and hyaline casts in the sediment. The hematocrit was 45 per cent. Leukocytes numbered 17,600 per cu. mm.—81 per cent polymorphonuclear cells. The serum sodium was 153 mEq. per liter, carbon dioxide was 46 mEq., potassium 3.9 mEq. and chloride 65 mEq. Blood nonprotein nitrogen 44 mg. per 100 cc. and total protein content 7.3 gm. per 100 cc.—albumin 4.8 gm. and globulin 2.5 gm. The van den Berg reaction totaled 4.8 mg. per 100 cc., 2.1 mg. being prompt and 2.7 mg. delayed. The alkaline phosphatase was 1.5 Bodansky units per 100 cc., cholesterol content 230 mg. per 100 cc. and thymol turbidity 1.7 units.

After the administration of intravenous fluids corrected the hypopotassemia and hypochloremia, vomiting diminished and there was gradual alleviation of the neuromuscular irritability. X-ray films of the upper gastrointestinal tract taken on the fifth day in hospital showed an extensively dilated stomach, emptying poorly. The duodenum, barely made out, appeared deformed. In a second roentgeno-

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Submitted March 5, 1958.

graphic examination three days later a small duodenal ulcer crater near the superior recess was observed.

Administration of fluids parenterally was continued, and by August 25 the serum sodium was 138 mEq., potassium 4.8 mEq., blood urea 57 mg. per 100 cc., serum calcium 12.5 mg. per 100 cc. and phosphorus 3.6 mg. per 100 cc. A 24-hour specimen of urine on August 28 contained 320 mg. of calcium.

Because normal alimentary function did not resume, subtotal gastrectomy of the Hofmeister type was done on August 30. The stomach was dilated and there was pronounced scarring around the first portion and narrowing of the second portion of the duodenum. Induration surrounded an ulcer crater that was eroding into the head of the pancreas. The porta hepatis was severely inflamed near the duodenum. The common duct was thickened and surrounded by inflammatory adenomatous tissue. The liver and gallbladder appeared normal. There was so dense a web of adhesions of the first portion of the duodenum that it was necessary to leave a portion of the ulcer crater on the head of the pancreas.

After the operation a diet low in calcium and phosphorus was prescribed. The jaundice vanished rapidly, and at the time of discharge from the hospital on September 20 the urine had a specific gravity of 1.027, 2-plus reaction for albumin, 2 to 4 leukocytes and 1 to 2 erythrocytes per high power field and 1 to 2 hyaline and 3 to 4 granular casts in the sediment. Blood urea content per 100 cc. was 12 mg., calcium 11.4 mg. and phosphorus 3.4 mg.

The patient had no further gastrointestinal distress and no further frequency and nocturia after operation. He used no alkalis and drank a quart of milk daily. Serum calcium a year after the operation was 9.6 mg. per 100 cc., phosphorus content 3.4 mg. and blood urea 11.0 mg. A concentrated morning specimen of urine had specific gravity of 1.035, an acid reaction and a normal Sulkowitch response. It contained no albumin, cells or casts. The blood pressure was 138/86 mm. of mercury. The ocular deposits remained unchanged.

DISCUSSION

Hypercalcemia and the accompanying calcinosis is not peculiar to the milk-alkali syndrome, yet hypercalciuria is not generally found. The fact that urinary excretion is not excessive suggests some interference with the renal excretory mechanism. Alkalosis, almost invariably present, probably plays the most important role in initiating the kidney impairment. It has been demonstrated that urinary calcium clearance is diminished by alkali administration,[1] and Burnett and his associates[3] showed significant reduction of renal clearance mechanisms resulting from alkalosis subsequent to pyloric obstruction. Upon correction of the alkalosis, decided improvement was manifested, leading to the suggestion that this renal insufficiency resembles, in some respects, lower nephron nephrosis. Renal failure associated with hypercalcemia has been observed in hyperparathyroidism, myelomatosis, vitamin D intoxication, skeletal immobilization, sacroidosis and carcinomatosis with generalized bone involvement.[1,5,14] Yet the hypercalcemia and renal failure in the milk-alkali syndrome will not likely arise from excessive calcium intake alone unless alkalosis is also present.[7]

The kidney deterioration may be furthered by the hypokalemia frequently associated with alkalosis.[23] In addition to the gastrointestinal loss, the high serum bicarbonate facilitates the transfer of potassium from the intracellular compartment and the entrance of sodium into the cell.[8] Additional potassium loss is incurred by the inability of an already impaired kidney to conserve potassium.[4] In a report of one other case in which muscular twitching was present,[29] the author expressed the belief that hypokalemia was crucial in the causation of the metabolic alkalosis and the genesis of the milk-alkali syndrome.

Elevation of the pH, of serum sodium and potassium ions may result in heightened muscle excitation. Neuromuscular irritability may also be induced by depression of serum calcium and magnesium.[11,12,13] In the case here reported, the elevated calcium, as well as the depressed potassium, probably exerted a protective influence against tetany. However, the alkalosis may have caused a decrease in the ionized calcium (and thereby a partial nullification of the calcium barrier) and may have been profound enough in itself to cause tetany.

Confusion in the differentiation from primary renal disorders is to be anticipated in this syndrome, yet infrequently in cases reported is there suggestive evidence of previous renal disease.[5,16,24] The changes expected with chronic nephritis—metabolic acidosis, hypocalcemia and hyperphosphatemia—are not present. Further, the rapid reversal of the azotemia and the renal failure pattern as soon as the ingestion of the alkali and milk is discontinued, probably gives the most impressive clue to the proper diagnosis of this syndrome. The serum calcium may fall to normal levels within one to two weeks.[24] In hyperparathyroidism therapy also may bring about improvement in renal function, still, in most instances, the hypercalcemia and hypercalciuria persist.

Several cases in which there was hypercalciuria, as in the one here presented, with other features pointing to Burnett's syndrome have been reported.[24,26] In those cases exploration was carried out for parathyroid adenoma, and no tumor was discovered. Subsequent discontinuance of ingestion of milk and alkali caused the chemical contents of the blood to become normal and hypercalciuria to abate. No explanation is apparent as to why these atypical cases exist, and whether, indeed, they are cases of milk-alkali syndrome. Hypercalciuria seems the core of the puzzle.

It has been suggested that the intravenous calcium loading test[15] may aid in diagnosis of borderline cases.[19,26] Information is very limited in regard to observations of the results of this test in cases of milk-alkali syndrome; hence significant conclusions as to its value in differential diagnosis are not yet established.

Reduction of both high serum calcium and high urinary calcium excretion can be effected in hyperparathyroidism by phosphate feeding and retention.[1,2] It is suggested that, in the Burnett syndrome, a sequence may result from ingestion of large amounts of alkali and milk. Caused by the high lactic content of inorganic phosphate, a diminution of calciuria will ensue as in renal failure. However, the constant intake of great amounts of calcium in Sippy powders and in milk is not defrayed to pay the deficit balance in bone disease as in hyperparathyroidism, and since it cannot be excreted, it is reflected by a rise in serum calcium and perhaps metastatic calcification. This produces the usual clinical pattern of milk-alkali syndrome.

With the above suggested mechanism operative, persistent phosphate consumption and retention with prolonged stimulation of the parathyroid glands may eventually lead to partial parathyroid gland exhaustion. Reflecting the hypoparathyroid response to an elevated calcium load,[12] an increasing hypercalciuria may become manifest, simulating the atypical cases of milk-alkali syndrome.

Study concerning the quantitative and temporal relationship of the alkali, phosphate and calcium consumption in contest, more frequent application of the Howard test in such circumstances, and measurement of tubular reabsorption of phosphorus, may help discern the cause of the defective handling of calcium in the Burnett syndrome.

In the present case jaundice was a perplexing feature early in the hospital course and caused concern as to the generation of a fulminant hepatitis. At operation, however, it was observed that inflammation and edema of the pancreas, resulting from the posteriorly penetrating duodenal ulcer was causing compression of the common bile duct. Jaundice may also be caused by inflammation of the biliary papilla secondary to duodenal ulcer, but is less frequent.[27] The pathogenic tempo of the ulcer may have been heightened by the use of prednisone, which probably, however, had little effect on the electrolyte changes.[9,11]

SUMMARY

The clinical and laboratory features of a case of milk-alkali syndrome are presented. The usual findings of hypercalcemia, alkalosis, renal insufficiency, azotemia and ocular calcinosis following prolonged ingestion of milk and absorbable alkali are reviewed. Despite early hypercalciuria, the restoration, upon treatment, of normal serum electrolyte levels and renal function serve to exclude other diagnoses. Clinical problems created by the additional presence of jaundice and tetany are discussed.

The most significant characteristics of the so-called milk-alkali syndrome still appear to be a history of milk and alkali intake, alkalosis, azotemia and a rapid restitution of normal status upon discontinuance of ingestion of milk and alkali.

596 South Carroll Street, Sunnyvale.

Acknowledgment: The author is indebted to Mrs. Elizabeth Smith, of the Santa Clara County Hospital Medical Library, for her aid in the preparation of this report.

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Gastric Diverticulum with Perforation And Generalized Peritonitis

PAUL M. WALSTAD, *M.D.*, Oakland, and
EVERETT H. JOHNSON, *M.D.*, Turlock

INTRAMURAL BENIGN TUMORS of the stomach, such as leiomyomas, are likely to undergo ulceration at the center. Continuation of this degenerative process eventually results in the formation of a pouch or diverticular-like process.[4]

Diverticula of the stomach, whether true or acquired, are uncommon. In 11,828 roentgenologic examinations of the stomach Cheney and Newell[2] noted only two. Rivers, Stevens and Kirklin[6] observed only four gastric diverticula in the course of 3,662 routine necropsies. Rupture of a gastric diverticulum is extremely uncommon. To date only four cases have been reported.[1,3,5]

REPORT OF A CASE

A married white woman, 78 years of age, was admitted to hospital on the afternoon of February 4, 1957, with severe abdominal pains and vomiting which came on two hours after a breakfast of pancakes that same morning. In the past the patient had felt generally well except for chronic constipation and some bloating after meals.

Although the patient seemed exhausted, feverish, and dehydrated she was calm and rational and complained only of pain in the abdomen. The temperature was 103°F., the pulse rate 100 and the blood pressure 100/60 mm. of mercury.

There was a hard mass in the upper, outer quadrant of the left breast consistent with carcinoma. The abdomen was moderately distended and rigid, and bowel sounds were diminished.

Leukocytes numbered 11,000 per cu. mm. of blood —72 per cent neutrophils, 24 per cent lymphocytes and 4 per cent monocytes. Results of urinalysis were within normal limits. The hemoglobin content was 13.85 grams per 100 cc. of blood and erythrocytes numbered 5 million per cu. mm.

Roentgenograms of the abdomen with the patient in the upright position showed no free air under the diaphragm and no dilated loops of large or small

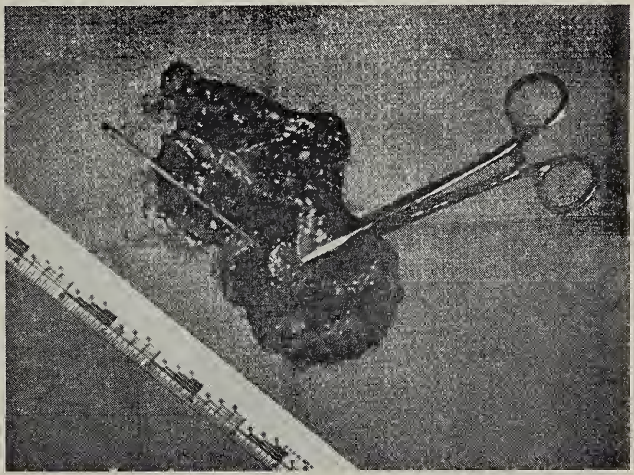
Figure 1.—Stomach lumen open to show probe passing into diverticular-like sac.

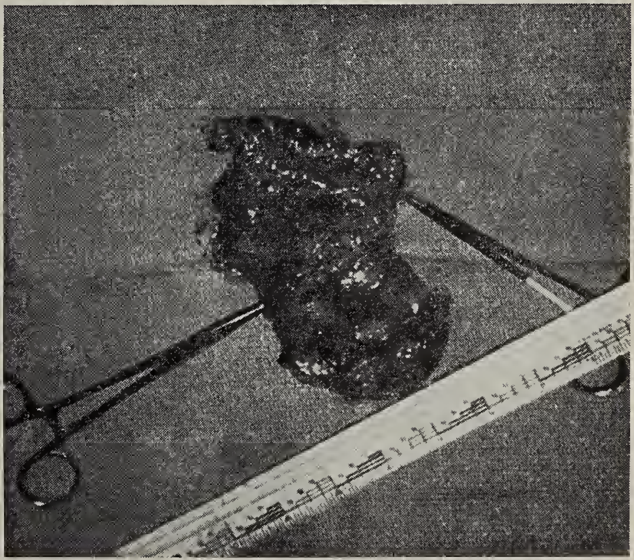
Figure 2.—Specimen showing sac in area below hemostats projecting downward from resected portion of stomach.

Submitted April 22, 1958.

bowel. There was no roentgenographic evidence of metastasis to the chest.

The immediate impressions were acute cholecystitis and cancer of the left breast with possible metastasis to the abdominal organs.

Initial treatment consisted of intravenous infusion of fluids to correct dehydration and gastric intubation to decrease vomiting and distention.

The next day the patient's condition was worse. There was board-like rigidity throughout the entire abdomen and generalized rebound tenderness. It was felt an intra-abdominal catastrophe had occurred, with ensuing peritonitis, and that operation was imperative. However, it was not until evening that the patient grudgingly consented to operation, primarily because of religious tenets forbidding surgical intervention in the treatment of an illness.

A right paramedian incision was made in the abdomen. Immediately, foul-smelling purulent fluid welled up into the wound. Although the fluid occupied all quadrants of the abdominal cavity it was noted to be pouring forth through a small gap in the mid-transverse mesocolon. An approach was then made into the lesser abdominal cavity through the transverse mesocolon. A necrotic-appearing sac about 8 cm. long and 6 cm. in diameter with a large rent in its neck arose from the posterior surface of the stomach near the cardia. The sac communicated with the lumen of the stomach. Because the sac was so large, a segmental gastric resection was done, the sac being incorporated in the portion removed (see Figures 1 and 2). The postoperative course was uneventful and the patient was dismissed from the hospital on the eleventh postoperative day. The pathological diagnosis of the specimen was ulcerated leiomyoma of the stomach with peritonitis.

Later the patient had a simple mastectomy for the breast tumor mass, which was adenocarcinoma. Postoperative x-ray therapy was given. At the time of last examination, a year later, the patient was in good health.

COMMENT

In routine exploration a surgeon is quite likely to overlook a gastric diverticulum unless the stomach is examined posteriorly through the transverse mesocolon or lesser omentum. Reoperation was reported necessary in a number of cases in which this examination was not done initially.[7] Various methods of treatment have been used, from segmental resection or amputation to simple invagination, depending upon the operative findings. Present treatment appears to favor simple excision of the diverticulum with repair of the defect in the stomach wall.[8]

SUMMARY

A case in which a leiomyoma had formed a gastric diverticulum with subsequent rupture and peritonitis has been presented.

2701 Fourteenth Avenue, Oakland (Walstad).

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Bleeding Esophageal Varices Due to Occult Cirrhosis of the Liver

NORMAN R. EADE, *M.D.*, and
STEPHEN J. STEMPIEN, *M.D.*, Long Beach

RECENTLY a patient was studied at the Veterans Administration Hospital, Long Beach, because of bleeding esophageal varices. Results of all liver function tests were essentially normal, yet at operation for a portocaval shunt, cirrhosis of the liver was observed.

It is commonly assumed that if liver function as measured by a battery of tests is found to be normal, there can be no significant cirrhosis, especially of the degree which causes esophageal varices. Linton,[3] speaking of liver function tests done in the presence of esophageal varices, said: "When the values of these tests are all normal, the site of the portal bed block is extrahepatic and lies within the portal venous system." That normal liver function does not always rule out the liver as the cause of bleeding esophageal varices is shown by the following case.

REPORT OF A CASE

In mid-October, 1956, the patient first noticed black stools. There were no other gastrointestinal symptoms. Unaware of the significance of black feces, the patient did not consult a physician until he became very weak. He then entered a hospital. The hemoglobin content at that time was 6 gm. per 100 cc. An x-ray study of the upper gastrointestinal tract showed esophageal varices. The patient received several blood transfusions. Six weeks later the stools became black again and the patient reentered the hospital. The hemoglobin content was 7.8 gm. per 100 cc. and again whole blood was administered.

From the Gastroenterology Section of the Medical Service, Veterans Administration Hospital, Long Beach 4.

Submitted February 28, 1958.

Results of studies during the two periods in hospital showed essentially normal liver function: Thymol turbidity 0.8 units, cephalin flocculation 1 plus in 48 hours, bromsulphthalein retention 6.5 per cent after 30 minutes, serum albumin content 4.5 gm. and globulin 1.8 gm. per 100 cc., cholesterol 100 mg. per 100 cc. and prothrombin time 80 per cent of normal.

In late December, 1956, the patient entered the Veterans Administration Hospital at Long Beach for further study.

Upon physical examination the patient was noted to be muscular, well nourished and appearing several years younger than his stated age of 37. There was abundant growth of hair on his body, especially on the chest and extremities. No spider angiomata were seen. There was no jaundice. The thyroid gland was not enlarged. No abnormalities in the heart and lungs were noted. The liver was felt at the right costal margin on inspiration and was not tender. The spleen was easily felt two fingerbreadths below the left costal margin. There was no visible venous distention on the chest or abdomen. There was no ascites and no peripheral edema.

For a period of four years the patient had worked for a beer distributing company and there daily drank as many as four bottles of beer, which was free. At no time was he in the habit of going without meals. After leaving the beer company, the patient went to work for a milk company and continued in this employment for the two years preceding admittance to hospital. There he received free milk and stopped drinking beer. The patient was married and had a good work record. In World War II he had been stationed in Alaska. He gave no history of having infectious hepatitis, but cases occurred in the area in which he was stationed.

The hemoglobin content was 15.2 gm. per 100 cc. Leukocytes numbered 7,500 per cu. mm.—78 per cent polymorphonuclear, 17 per cent lymphocytes, 4 per cent monocytes and 1 per cent eosinophils. The sedimentation rate was 1 mm. in one hour and the hematocrit 49 per cent. A serologic test was negative for syphilis. Urinalysis was within normal limits. There was no bile in the urine and the urobilinogen content was 0.34 mg. per 100 cc. The stools showed only cysts of Endolimax nana.

Results of liver function tests were as follows:

	Jan. 3	Jan. 14	Jan. 22	Jan. 25
Albumin: Globulin ratio (gm. per 100 cc.)	......	4.8:2.0	4.9:1.8	......
Total bilirubin (mg. per 100 cc.)	0.4	0.2	0.1	......
Alkaline phosphatase (units)	5	4.8	12.3	......
Cephalin flocculation	0/0	0/0	0/0	......
Thymol turbidity (units)	1.3	2.5	2.5	......
Prothrombin time	......	70%	70%	......
Bromsulphthalein retention	......	....	......	3%

During his stay at the Veterans Administration Hospital the patient had no recurrence of gastrointestinal bleeding. Roentgenographic and esophagoscopic examination reconfirmed the presence of varices of the esophagus. Biopsy of liver tissue removed by insertion of a Vim-Silverman needle through the lower right anterolateral chest was unsatisfactory because the specimen was too small. However, the tissue that was obtained was interpreted as being normal. On February 12, 1957, a portocaval shunt was performed. Preoperatively a percutaneous splenoportogram was done. Generalized dilatation of the portal system was noted and there was no evidence of portal vein thrombosis. At operation the portal venous system was dilated and the pressure was 280 mm. of saline solution. The liver was grossly nodular. The postoperative course was uneventful and the patient was discharged 9 days after the operation. Microscopic examination of the liver specimen obtained at operation showed obvious cirrhosis with mild fibrosis and mild pseudolobular formation but with preservation of much normal liver.

COMMENT

The results of liver function tests in this case were essentially normal except for a determination of serum cholesterol of 100 mg. per 100 cc. and one serum alkaline phosphatase value of 12.3 units, which may have been a laboratory error.

The cause of cirrhosis in the present case was not definitely established. It is possible that the patient had infectious hepatitis during his Army tour in Alaska. On the other hand, even though his alcoholic intake did not appear to be excessive, it may have been larger than was stated.

It should be noted that the liver biopsy specimen obtained via a Vim-Silverman needle was not satisfactory and that if the specimen had been larger the diagnosis might have been readily apparent at that time.

DISCUSSION

When gastrointestinal bleeding is due to esophageal varices caused by cirrhosis of the liver, the diagnosis often is not difficult. The underlying cirrhosis conveniently produces ample abnormalities in the way of history, physical signs and reactions to laboratory tests. However, this is not always true and cirrhosis may be a very silent illness, indeed. Welch[8] mentioned that patients may have no clinical evidence of liver disease yet bleed from esophageal varices.

Ricketts and co-workers[6,7] in 1950 reported on 50 patients with portal cirrhosis. They noted that results of conventional tests of hepatic function may be normal in portal cirrhosis; that pronounced fibrosis of the liver did not alter the results of such tests, and that physical findings such as splenomegaly, collateral circulation of the abdomen and esophageal varices may be present without relationship to liver failure.

Higgins[2] in a report on 115 cases of patients with esophageal varices stated that "there seemed to be no relationship between the occurrences of varices and the presence of an enlarged liver or spleen, jaundice, ascites, edema, collateral venous circulation or spider angiomata."

The signs and symptoms of cirrhosis can be divided into two groups: Those produced by liver cell failure and those produced by mechanical factors. In the first group are findings such as jaundice, ascites, peripheral edema and abnormal reaction to liver function tests (positive cephalin flocculation, elevated thymol turbidity, elevated bromsulphthalein retention, reversal of the albumin-globulin ratio). In the second group would be the signs and symptoms produced by portal hypertension, such as splenomegaly, hypersplenic syndrome, esophageal varices and distended abdominal veins. The two groups of signs and symptoms produced by hepatic functional failure and hepatic mechanical failure, often are present together but may appear separately.

It is common practice to use the bromsulphthalein test to evaluate liver function in cases of upper gastrointestinal bleeding. Of 12 patients with asymptomatic cirrhosis of the liver reported upon by Ricketts and co-workers[6,7] only five had increased retention of bromsulphthalein. This is a useful test, but a normal result does not exclude the presence of cirrhosis and therefore may not on occasion exclude the presence of esophageal varices.

To show the presence of varices, if suspected, more than just liver function tests should be done. A careful x-ray study of the esophagus, especially the lower third, is necessary. Films need to be taken when the organ is relaxed and not overly distended with barium. The Valsalva maneuver[4] has been shown to be useful in bringing out varices.

Failure to visualize varices roentgenographically should not be taken as evidence that they do not exist. In 150 cases of cirrhosis of the liver studied by Brick and Palmer,[1] 95 of the patients were found to have varices by esophagoscopic examination, whereas the lesions were diagnosed by x-ray examination in only 29 patients.

Endoscopy is the single most reliable method of detecting varices of the esophagus.[5]

SUMMARY

Essentially normal results of liver function tests do not always exclude the presence of cirrhosis of the liver. Sometimes such results do not exclude the presence of bleeding from esophageal varices due to cirrhosis of the liver, as illustrated by a case reported.

The bromsulphthalein test should not be relied upon to exclude bleeding esophageal varices.

Careful x-ray studies and, most important of all, careful endoscopic examinations are needed to prove the presence or absence of esophageal varices.

Veterans Administration Hospital, 5901 East Seventh Street, Long Beach 4 (Stempien).

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California MEDICINE

For information on preparation of manuscript, see advertising page 2

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EDITORIAL

A.M.A. Meeting

The American Medical Association, meeting in San Francisco in late June, proved again, despite dour forecasts and uncomplimentary editorial comments, that American medicine carries on its business in a democratic manner and reaches its decisions after full and free debate.

Early newspaper publicity was centered on the housing difficulties in San Francisco, where an adequate number of hotel rooms was available but the quality of some of the local hostelries was not up to first cabin expectations. While this note tended to die away as the meeting progressed, it is noteworthy that the tentative plan to hold the 1962 session in San Francisco was held in abeyance. Meanwhile, it was announced that Chicago has been dropped as the 1960 convention city in favor of Miami Beach.

On the business side the House of Delegates rolled up its sleeves and considered 72 resolutions which covered a wide scope of topics. A condensed report on some of the major actions taken by this legislative body appears on another page of this issue.

Among the more torrid propositions before the House was a demand for immediate action on two resolutions adopted last December. One of those resolutions called for the A.M.A. to initiate discussions with third parties representing patients, for the purpose of developing principles governing the dealings of third parties with members of the medical profession. The other proposed a program of public education on the advantages of the free choice of physician by the patient. Both resolutions were aimed at the medical care plan of the United Mine Workers of America, which, as administrator of a large fund for medical care of its members, has embraced a policy of selecting panel physicians in the various areas where it operates.

The Board of Trustees of the A.M.A. asked the Commission on Medical Care Plans to study these December resolutions and their backgrounds and to report back with findings and recommendations. The new resolutions introduced by various state delegations at the June meeting demanded immediate action to carry out the purposes of the resolutions passed in December. The reference committee recommended deferring action until the commission's report was made, for it was believed the report would contain recommendations regarding relations of physicians, patients and third parties which would better define the area of action. However, the House of Delegates overrode this section of the reference committee's report and directed that the A.M.A. staff begin instantly to carry out the programs in question.

Seven separate resolutions on Social Security went through the mill of the House of Delegates, three of them calling for a referendum of A.M.A. members on compulsory inclusion of physicians under the Social Security laws, two calling for such compulsory inclusion and one asking for state-by-state inclusion under Social Security. All these were defeated, the House of Delegates holding that any polls to be taken should be carried out by those states desiring such polls, the results to be transmitted to the A.M.A. delegates from the polling state. It was pointed out that the A.M.A. makes no provision in its by-laws for polls or referendums of the membership and that the policy-making prerogative lies in the House of Delegates, whose powers should not be usurped.

On the subject of raising and distributing funds for voluntary health organizations, the House reiterated its commendation of these agencies, recognized their right to be free to conduct their own programs of research, education and fund-raising, and urged the American Medical Research Foundation to take no steps to endanger the constructive activities of the national voluntary health agencies.

Regarding the Veterans' Administration, the House noted the expenditures of more than $619,-

000,000 for hospitalized care of veterans in 1957 and suggested that vast economies could result from restricting the admission of veterans to those who had service-connected illness. About three-quarters of current admissions are for nonservice-connected disabilities. The House also urged that the Dean's Committee limit its activities in VA hospitals to those admitting only patients with service-connected disease.

The House also considered the Medicare program and voted down a proposal that repeal of Public Law 569 should be sought. Instead, it was voted that the individual states should determine with Medicare administrators the type of contract they wish. It was also voted to reaffirm an earlier decision that this legislation does not require fixed fee schedules but that physicians should be permitted to charge their usual fees for Medicare cases, in the interest of economy of administration and the maintenance of orderly economics in medical practice.

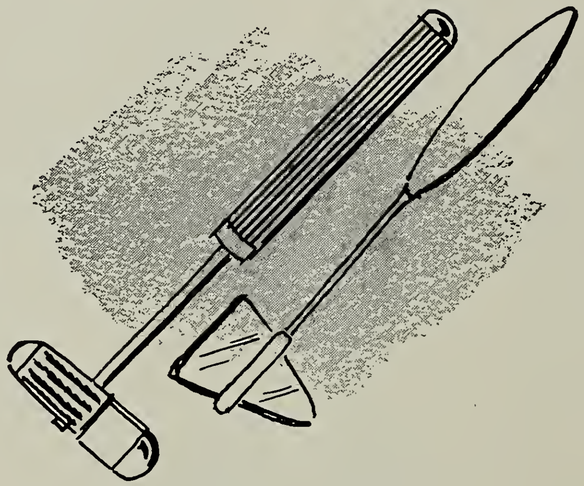
A California resolution, asking the Board of Trustees to reevaluate the Washington office of the A.M.A. so that it might achieve its original purpose of "effective public and government relations," was adopted by the House and sent to the Board of Trustees for activation. Another California resolution, asking the appointment of a committee on atomic medicine, which would concern itself with informing the public on all aspects of radiation hazards, was also approved by the delegates.

In the elections climaxing the session, Dr. Louis M. Orr, urologist from Orlando, Florida, was chosen president-elect, following Dr. Gunnar Gundersen of LaCrosse, Wisconsin, who succeeded Dr. David B. Allman of Atlantic City as president. California was again honored by the unanimous reelection of Dr. E. Vincent Askey of Los Angeles as Speaker of the House of Delegates. Results of other elections are printed elsewhere in this issue.

Scientifically, the A.M.A. session again presented to the American public a broad view of modern medical advances, including a nationwide telecast of an actual heart operation on a San Francisco boy, utilizing a heart-lung machine.

The new "Mole Hall" exhibit area just completed under the city's Civic Center, housed a large number of medical exhibits which drew national acclaim for their imagination, construction and educational values.

All in all, the American Medical Association carried off its 1958 annual session in the true tradition of "the greatest medical show in the world."



California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 436th Meeting of the Council, San Francisco, St. Francis Hotel, June 7, 1958.

The meeting was called to order by Chairman Lum in the Georgian Room of the St. Francis Hotel, San Francisco, on Saturday, June 7, 1958 at 9:30 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Secretary Daniels, Editor Wilbur and Councilors MacLaggan, Wheeler, Todd, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Harrington, Davis, Sherman, Lum, Bostick and Teall.

Absent for cause, Vice-Speaker Heron, Councilor Foster.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Thomas, Clancy, Gillette, Whelan and Collins of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; Doctor W. E. Batchelder; Eugene Salisbury of the Public Health League of California; county society executives Scheuber of Alameda-Contra Costa, Rosenow of Los Angeles, Pettis of Los Angeles, Field of Los Angeles, Bannister of Orange, Marvin of Riverside, Foster of Sacramento, Donmyer of San Bernardino, Nute of San Diego, Neick of San Francisco, Thompson of San Joaquin, Wood of San Mateo and Donovan of Santa Clara; Doctors A. E. Larsen and William Gardenier and Messrs. Paolini and Wahlberg of California Physicians' Service; William Rogers of the California Academy of General Practice; Doctor Malcolm Merrill, State Director of Public Health; Doctor Marshall Porter, State Director of Mental Hygiene; Doctors Malcolm Watts, David A. Wood, Jay Ward Smith, Thomas Elmendorf and Oscar Railsback, and others.

1. *Minutes for Approval:*

(a) On motion duly made and seconded, minutes of the 434th meeting of the Council, held April 26 to April 30, 1958, were approved.

(b) On motion duly made and seconded, minutes of the 435th meeting of the Council, held April 30, 1958, were approved.

2. *Membership:*

(a) A report of membership as of June 5, 1958, was presented and ordered filed.

(b) On motion duly made and seconded, 293 delinquent members whose dues had been received were voted reinstatements.

(c) On motion duly made and seconded in each instance, 19 applicants were voted Associate Membership. These were: Jean Dehlinger, James O. Gillespie, Alameda-Contra Costa County; Donald E. Burdick, Paul Burt Kinney, Hazel W. Krause, Leonard M. Linde, Charles H. Markham, Edmund L. Sherwood, George X. Trimble, Los Angeles County; Mary Jaros, Marin County; Gerald S. Barker, Napa County; Frank R. Lemon, San Bernardino County; T. L. Althausen, Jr., David P. Brown, William D. Byrne, Roland Levy, San Fran-

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cisco County; Duane Deakins, San Joaquin County; Clifford Walker, San Luis Obispo County; E. Wylda Hammond, Sonoma County.

(d) On motion duly made and seconded in each instance, 12 applicants were voted Retired Membership. These were: V. L. Andrews, Hiram Gallagher, Glen E. Glasgow, Dean E. Godwin, August H. Larson, Daniel D. Lucey, James R. Martin, Solomon Strouse, Howard F. West, Los Angeles County; Alfred Newman, San Francisco County; Marshall L. Carter, Leon Melkonian, Santa Clara County.

(e) On motion duly made and seconded in each instance, 18 members were voted a reduction of dues because of illness or postgraduate study.

3. *Financial:*

(a) A report of bank balances as of June 5, 1958, was presented and ordered filed.

(b) A report of income and expenditures for May and for the 11 months ended May 31, 1958, was presented and ordered filed.

(c) On motion duly made and seconded, it was voted to purchase, provided a suitable discount could be secured, a contract in the face amount of $80,000 issued by a blood bank in California to a physician. A vote of three-fourths was noted and the Finance Committee was authorized to negotiate for the purchase of this obligation.

4. *House of Delegates Resolutions:*

(a) The Council considered a series of resolutions referred to the Council by the 1958 House of Delegates for further study. These were:

Resolution No. 18. On motion duly made and seconded, it was voted to approve the resolution and refer it to a special committee chairmanned by Doctor West and to the California Delegates to the American Medical Association.

Resolution No. 23. On motion duly made and seconded, it was voted to refer this matter to the Committee on Public Relations.

Resolution No. 42. On motion duly made and seconded, it was voted to refer this matter to Doctor West's committee.

Resolution No. 48. On motion duly made and seconded, it was voted to adopt this resolution.

Resolution No. 63. On motion duly made and seconded, it was voted to delete the section of the resolution referring to the Board of Trustees of the American Medical Association and to adopt the resolution in this amended form.

(b) The Council considered a series of resolutions adopted by the 1958 House of Delegates but requiring Council consideration and/or action. On motion duly made and seconded in each instance, the Council took the following actions on these resolutions:

Resolution No. 1—Referred to Committee on Legislation.

Resolution No. 3—Referred to Committee on Legislation.

Resolution No. 9—Request county societies to offer their committee services in third party cases.

Resolution No. 31—Referred to Commission on Professional Welfare.

Resolution No. 32—Referred to Committee on Public Relations.

Resolution No. 34—Voted to allow a per diem of $100 to the President and President-Elect while on official business, provided a $10,000 annual maximum would prevail.

Resolution No. 40—Referred to Committee on Legislation.

Resolution No. 52—Referred to Committee on Legislation, with instructions for the committee to confer with the State Department of Motor Vehicles.

Resolution No. 58—Accept and approve the first two sections of the resolution and refer the third section to the Committee on Public Relations.

Resolution No. 59—No action needed, since the requirements of the resolution have already been met.

Resolution No. 62—Referred to Commission on Medical Services for study.

Resolution No. 67—Referred to Committee on Legislation.

5. *Commission on Medical Services:*

(a) Doctor Harrington reported that the Liaison Committee to the State Department of Social Welfare will meet soon with that department. In this connection he gave a progress report on the preferences of members as to methods of payment preferred under the Public Welfare Assistance Act.

(b) Doctor Harrington reported that hearings will soon be held by the Senate Interim Committee on Social Welfare. It was agreed that Doctor West should represent the Association in presenting its attitude toward the Public Welfare Assistance Act and that Doctor Harrington and representatives of California Physicians' Service should attend as technical advisors.

(c) Chairman Lum read a letter from a member of a county medical society which was critical of the actions of Doctor Harrington as chairman of the Liaison Committee and Doctor Dan O. Kilroy as chairman of the Committee on Legislation. The chairman also read letters received from several other county societies which expressed confidence in and commendation of these two committee chairmen. On motion duly made and seconded, it was voted to reaffirm the confidence of the Council in Doctors Harrington and Kilroy and to commend them for their valuable services in behalf of the Association, and to advise all county medical societies to this effect.

(d) Doctor Harrington suggested that the work of the Liaison Committee and of the Committee on Indigent and Aged were somewhat parallel and that Doctor Thomas Elmendorf, chairman of the Committee on Indigent and Aged, be added as a member of the Liaison Committee. On motion duly made and seconded, it was voted to appoint Doctor Elmendorf as a member of the Liaison Committee.

6. *Commission on Medical Education:*

Doctor Daniels reported on a meeting of the Committee on Scientific Work, at which it was decided that postgraduate courses, using faculties from University of California and Stanford, would be given at the 1959 Annual Session. The committee also discussed the possibility of rearranging the general sessions so as to eliminate clinical-pathological conferences, and substitute sessions on socio-economic topics. The committee plans to confer with the Medical Review and Advisory Board on this proposal.

7. *Commission on Public Health and Public Agencies:*

Doctor MacLaggan reported that the Committee on Allied Health Agencies had met and discussed the feasibility of providing for approval of voluntary health agencies. He stated that further study would be given to this subject.

8. *Commission on Public Policy:*

(a) Mr. Eugene Salisbury of the Public Health League of California reported that a proposal was now before the Congress to provide that medical services for dependents of military personnel be provided only in military installations.

(b) Doctor Malcolm Watts, chairman of the Committee on Public Relations, reported that the committee was planning meetings to start in September. This committee was given several items for study during the Council's discussion of House of Delegates actions.

9. *Committee Appointments:*

(a) Doctor Bostick requested clarification of the status of the Committee on Committees. On motion duly made and seconded, it was voted to continue this committee as a standing committee of the Council.

(b) On motion duly made and seconded, it was voted to reappoint Doctor Donald A. Charnock as a member and chairman of the Judicial Commission.

(c) Doctor Bostick was requested to bring nominations to the Council for appointment to the Committee on Adoptions, which is to be reactivated.

10. *Foreign Medical School Graduates:*

Doctor William A. Winn of Tulare County, medical director of the Tulare-Kings County Hospital, reported a need for medical graduates who could be trained in tuberculosis work and suggested that some form of temporary licensure be evolved to permit graduates of foreign medical schools to serve in tuberculosis hospitals in clinical medical capacities while being trained. On motion duly made and seconded it was voted to refer this request to the State Board of Medical Examiners and the deans of the medical schools.

11. *Commission on Professional Welfare:*

Doctor Arthur A. Kirchner, chairman of the Medical Review and Advisory Board, reported on the anticipated completion in July of a study being made on professional liability cases in hospitals. The committee may wish to publish this study, he stated.

Mr. Whelan reported progress in the establishment of panels of physicians in San Diego, San Francisco and Alameda Counties to serve as consultants in professional liability cases.

12. *Commission on Medical Services:*

Doctor Frank J. Cox, representing the Committee on Fees, suggested that the original format of the Relative Value Study be utilized in resurveying this study. He also asked that the county societies be asked to cooperate, with the expectation that county returns could be made available to the societies. In view of the expanded nature of the resurvey, it was regularly moved, seconded and voted by a three-fourths vote to appropriate an additional $4,000 for this project, and to make the total cost $10,000.

Doctor Cox also requested the members of the Council to advise the county societies in their areas on the impending resurvey of the Relative Value Study and to solicit their cooperation.

13. *State Department of Public Health:*

Doctor Malcolm H. Merrill, State Director of Public Health, reported that there was a current upswing in the incidence of paralytic poliomyelitis, a seasonal expectation, and stated that his department was still anxious that vaccine be given to all citizens to age 40.

Doctor Merrill also reported that the mosquito density in selected areas is being studied in advance of the encephalitis season. The department has also issued regulations for the use of nalline in determining narcotics addiction and is currently working on strengthening the area control of rabies.

Some increase over the current $5,200,000 annual federal appropriation for Hill-Burton hospital construction funds is expected, Doctor Merrill said.

14. *State Department of Mental Hygiene:*

Doctor Marshall Porter, State Director of Mental Hygiene, reported on the need of further studies and research on alcoholism. He also reported that community mental health centers established under terms of the Short-Doyle Act are progressing slowly but smoothly.

Doctor Porter also reported that the 1958-1959 budget for his department totals about $102,000,000, an increase of some $7,000,000 over the current fiscal year. The additional funds will be used, he said, for training of physicians in psychiatry, for additional supplies of drugs and for other professional purposes.

15. *Legal Department:*

Mr. Hassard reported that a case decided in the Superior Court, holding that a district hospital had the right to maintain proper standards for naming staff members, had been appealed by the plaintiff, a physician denied such staff membership.

Mr. Hassard also reported that an appeals court had upheld the conviction in a lower court of a practitioner in another profession who had been found guilty of aiding and abetting the unlawful practice of his profession by associating with himself and delegating duties to a practitioner of a third profession whose license did not permit him to carry out such practices.

On motion duly made and seconded, with a three-fourths vote noted, it was voted to share expenses, up to a maximum of $3,000, with a component medical society in an organizational matter involving questions of statewide significance.

16. *California Physicians' Service:*

Mr. Etchel Paolini reported for California Physicians' Service that 185,943 claims had been processed in May on the public welfare assistance program.

On motion duly made and seconded, it was voted that no objection would be raised to the proposal that California Physicians' Service offer a pre-payment plan to the authorities of a county for the establishment of a program of medical care for indigents.

17. *Time and Place of Next Meeting:*

It was agreed that the next meeting of the Council be set for Saturday, July 12, 1958, in Los Angeles.

Donald D. Lum, M.D., *Chairman*
Albert C. Daniels, M.D., *Secretary*

A.M.A. House of Delegates

This summary of actions of the American Medical Association's 107th Annual Meeting, held June 23 to 27, 1958 in San Francisco, covers only a few of the many important subjects dealt with by the House of Delegates and is not intended as a detailed report of all actions taken.

The United Mine Workers of America Welfare and Retirement Fund, Social Security coverage for self-employed physicians, relations with voluntary health organizations, veterans' medical care, the Medicare program, the Association's Washington Office and over-all legislative system, the medical aspects of hypnosis and the advertising of over-the-counter medications were among the variety of subjects acted upon by the House of Delegates at the American Medical Association's 107th Annual Meeting held June 23-27 in San Francisco.

Dr. Louis M. Orr, urologist of Orlando, Fla., was chosen unanimously as president-elect for the coming year. Dr. Orr, who in recent years has been vice speaker of the House of Delegates and chairman of the A.M.A. Committee on Federal Medical Services, will become president of the American Medical Association at the June, 1959, meeting in Atlantic City. He then will succeed Dr. Gunnar Gundersen of La Crosse, Wis., who became the 112th president at the Tuesday night inaugural ceremony in the Rose and Concert Rooms of the Sheraton-Palace Hotel.

The 1958 Distinguished Service Award of the American Medical Association was voted to Dr. Frank Hammond Krusen, professor of physical medicine and rehabilitation at Mayo Foundation, Rochester, Minn., for his outstanding achievements and contributions in the field of physical medicine and rehabilitation. For only the fourth and fifth times in A.M.A. history, the House also approved special citations to laymen for outstanding service in advancing the ideals of medicine and contributing to the public welfare. Recipients of these awards were Mrs. Charles W. Sewell of Otterbein, Ind., who has spent 45 years in rural health work, and Gobind Behari Lal, Ph.D., distinguished science writer and Pulitzer prize winner.

UNITED MINE WORKERS

Major discussion of relations between medicine and the UMWA Welfare and Retirement Fund centered on a reference committee report which concurred in a Board of Trustees opinion that final action on two resolutions adopted in December, 1957, should be postponed until the final report of the Commission on Medical Care Plans is received.

One of those resolutions, Number 20, declared that "a broad educational program be instituted at once by the American Medical Association to inform the general public, including the beneficiaries of the Fund, concerning the benefits to be derived from preservation of the American right to freedom of choice of physicians and hospitals as well as observance of the 'Guides to Relationships Between State and County Medical Societies and the UMWA Welfare and Retirement Fund' adopted by this House last June." The other resolution, Number 24, called for the appropriate A.M.A. committee or council to engage in conferences with third parties to develop general principles and policies which may be applied to their relationships with members of the medical profession.

In explaining its position that final action on the two resolutions should be taken only after proper study, the reference committee said it "anticipates that the final report of the Commission on Medical Care Plans will contain recommendations serving to clarify the relationships between the medical profession, the patient and third parties, and the committee has been assured that this can be expected." The committee also urged the Commission to present its recommendations no later than December, 1958.

The House of Delegates, however, by a vote of 110 to 72, adopted a floor amendment "that this section of the Reference Committee report be amended to show that our A.M.A. Headquarters Staff is directed, under supervision of the Board of Trustees, to proceed immediately with the campaign which was originally ordered at Philadelphia last December, that no further delays will be tolerated, and that the Council on Medical Service be relieved of any further responsibility in this matter."

SOCIAL SECURITY COVERAGE

In considering seven resolutions dealing with the inclusion of self-employed physicians under the Social Security Act, the House disapproved of three which called for polls or a referendum of the A.M.A. membership, one which favored state-by-state participation in Social Security, and two which called for compulsory inclusion on a national basis. Instead, the House adopted a resolution pointing out that "American physicians always have stood on the principle of security through personal initiative," and reaffirming unequivocal opposition to the compulsory inclusion of self-employed physicians in the Social Security system.

On the question of polls, the House expressed the opinion that any poll should be taken on a state-by-state basis and the results transmitted to the A.M.A. delegates from that state. It also pointed out that since there is no provision in the Constitution and By-Laws for a referendum of members, such a referendum would usurp the duties and prerogatives of the House of Delegates, which is the Association's policy-making body.

VOLUNTARY HEALTH ORGANIZATIONS

Dealing with problems that have arisen in the raising and distributing of funds since development of the concept of united community effort, the House adopted the following statement offered in the form of amendments from the floor:

"1. That the House of Delegates reiterate its commendation and approval of the principal voluntary health agencies.

"2. That it is the firm belief of the American Medical Association that these agencies should be free to conduct their own programs of research, public and professional education and fund raising in their particular spheres of interest.

"3. That the House of Delegates respectfully requests that the American Medical Research Foundation take no action which would endanger the constructive activities of the national voluntary health agencies.

"4. That the Board of Trustees continue actively its studies of these perplexing problems looking forward to their ultimate solution."

VETERANS' MEDICAL CARE

Pointing out that the Federal government spent $619,614,000 on hospitalized medical care of veterans in VA hospitals in 1957, of which about 75 per cent had non-service-connected disabilities, and that ways and means of obtaining economy in Federal government are allegedly being sought by Congress at this time, the House urged Congressional action to restrict hospitalization of veterans at VA hospitals to those with service-connected disabilities. It also recommended that the American Medical Association suggest to the Dean's Committees that they restrict their activities to Veterans Administration hospitals admitting only patients with service-connected disabilities.

THE MEDICARE PROGRAM

In disapproving a resolution calling for repeal, modification or amendment of Public Law 569, the House took the position that desired changes in the Medicare program could be accomplished through modification of the present implementing directives without the necessity for new legislation. The House reaffirmed the action taken last year in New York recommending that the decision on type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination. Also reaffirmed was the Association's basic contention that the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules; the establishment of such schedules would be more expensive than permitting physicians to charge their normal fees, and fixed fee schedules would ultimately disrupt the economics of medical practice.

WASHINGTON OFFICE

The House adopted a resolution requesting the Board of Trustees to make an immediate survey and re-evaluation of "the functions and effectiveness of the over-all A.M.A. legislative system, including the Washington office, in the light of present-day needs of the government, public and medical profession alike for effective liaison between government and medicine on all matters affecting the public's health and adequate, prompt and accurate transmittal to the full membership of the A.M.A. of information on all current public issues in which the physician has a direct interest." The House asked that the Board of Trustees implement, as rapidly as possible, all changes and additions that its survey discloses are desirable to achieve the basic purpose of the resolution, "effective public and government relations."

MEDICAL ASPECTS OF HYPNOSIS

A Council on Mental Health report on "Medical Use of Hypnosis" was approved by the House, which recommended that it be published in the *Journal of the American Medical Association* with bibliography attached. The report stated that general practitioners, medical specialists and dentists might find hypnosis valuable as a therapeutic adjunct within the specific field of their professional competence. It stressed, however, that all those who use hypnosis need to be aware of the complex nature of the phenomena involved. Teaching related to hypnosis should be under responsible medical or dental direction, the report emphasized, and should include the indications and limitations for its use. The report urged physicians and dentists to participate in high level research on hypnosis, and it vigorously condemned the use of hypnosis for entertainment purposes.

OVER-THE-COUNTER MEDICATIONS

The House endorsed recommendations by the Public Relations Department that:

The A.M.A. join with other interested groups in setting up an expanded voluntary program, coordinated by the National Better Business Bureau, which will seek to eliminate objectionable advertising of over-the-counter medicines.

The A.M.A. consult with the National Better Business Bureau in the selection of a physicians' advisory committee.

The established facilities of the A.M.A., such as the Chemical Laboratory, the offices of the various scientific councils, and the Bureau of Investigation, be made available, so far as is feasible, to aid in the carrying out of this program.

The Public Relations Department continue its liaison work with the various groups involved and assist in the development and operation of this program in any way possible.

The A.M.A. become a sustaining member of the National Better Business Bureau, giving evidence of its willingness and desire to support this organization in its worthwhile activities.

MISCELLANEOUS ACTIONS

Among a wide variety of actions on many subjects, the House also:

Adopted amendments to the **Constitution and Bylaws** which eliminate the separate offices of Secretary and Treasurer, combining them into one, and which change the titles of the General Manager and Assistant General Manager to Executive Vice President and Assistant Executive Vice President;

Recommended the appointment of a Committee on **Atomic Medicine** and Ionizing Radiation and suggested that it concern itself with informing the American public on all phases of radiation hazards related to the national health;

Approved in principle the admission of the **Virgin Islands Medical Society** as a constituent society of the American Medical Association;

Commended the **Federal Food and Drug Administration** for its untiring efforts in behalf of the public and the profession, and urged all states to review and strengthen their food and drug laws;

Approved the "Suggested Guides for the Organization and Operation of Medical Society **Committees on Aging,"** submitted by the Council on Medical Service;

Commended the Committee on Medical and Related Facilities of the Council on Medical Service for its report on the **Hill-Burton** Study and approved its recommendations;

Requested that any funds provided under the Public Assistance provisions of the Social Security Act for medical care of the indigent be administered by a voluntary agency such as Blue Shield on a cost plus basis or by a specific agency established by the medical society of the state in which indigent care is rendered;

Directed the Board of Trustees to study problems pertaining to licensure by reciprocity and to consult with the Federation of State Medical Boards in an attempt to find a satisfactory solution;

Urged all members of the House of Delegates to give full consideration to the preliminary report of the Committee on Preparation for General Practice and to submit comments and suggestions to that committee;

Expressed the opinion that some operating room experience is valuable and necessary training for all nurses;

Recommended that general hospitals, wherever feasible, be encouraged to permit the hospitalization of suitable psychiatric patients, and

Approved a National Interprofessional Code for physicians and attorneys prepared by the joint liaison committee of the American Medical Association and the American Bar Association.

OPENING SESSION

At the Monday opening session Dr. David B. Allman, retiring A.M.A. president, urged every physician to rededicate himself to the service of mankind and every medical society to strengthen its disciplinary system "to prevent the very few from besmirching the vast majority of us." Dr. Gundersen, then president-elect, said the Association is moving ahead in finding the best possible ways to serve both the public and the medical profession, and he declared there is no reason to believe that its influence and impact will not continue to grow in the times ahead. The Goldberger Award in clinical nutrition was presented to Dr. Virgil P. Sydenstricker, professor emeritus of medicine at the Medical College of Georgia.

INAUGURAL CEREMONY

Dr. Gundersen, in his Tuesday night inaugural address, called upon the medical profession to accept its full responsibilities in promoting better world health, brotherhood and peace, adding that "the time has come when medical statesmanship must be used to augment the methods of political diplomacy." Dr. Gundersen also presented the Distinguished Service Award to Dr. Krusen and the special layman citations to Mrs. Sewell and Dr. Lal. The Shrine Chanters of Oakland, Calif., provided choral numbers during the program.

ELECTION OF OFFICERS

In addition to Dr. Orr, the new president-elect, the following officers were selected by the House on Thursday: Dr. W. Linwood Ball of Richmond, Va., vice president; Dr. E. Vincent Askey of Los Angeles, re-elected speaker, and Dr. Norman A. Welch of Boston, vice speaker.

Dr. Warren W. Furey of Chicago was elected for a five year term on the Board of Trustees, succeeding Dr. E. S. Hamilton of Kankakee, Ill. Dr. Raymond M. McKeown of Coos Bay, Ore., was re-elected for a five year term, and Dr. R. B. Robins of Camden, Ark., was named to fill the unexpired term of Dr. F. J. L. Blasingame. Dr. Leonard W. Larson of Bismarck, N. D., was elected chairman of the Board at its organizational meeting after the Thursday elections.

Dr. George A. Woodhouse of Pleasant Hill, Ohio, was renamed to the Judicial Council. Elected to the Council on Medical Education and Hospitals were Dr. Leland S. McKittrick of Brookline, Mass., to succeed himself, and Dr. John V. Bowers of Madison, Wis., to succeed Dr. Victor Johnson of Rochester, Minn.

Dr. R. B. Chrisman, Jr., of Coral Gables, Fla., and Dr. J. F. Burton of Oklahoma City, Okla., were re-elected to the Council on Medical Service. For the same Council, Dr. Russell B. Roth of Erie, Pa., was named to fill the unexpired term of Dr. H. B. Mulholland of Charlottesville, Va., resigned.

Three members were elected to the Council on Constitution and Bylaws: Dr. William Stovall of Madison, Wis., to succeed Dr. Stanley H. Osborn of Hartford, Conn.; Dr. William Hyland of Grand Rapids, Mich., to fill the unexpired term of Dr. Floyd S. Winslow, deceased, of Rochester, N. Y., and Dr. Walter Bornemeier of Chicago, to replace Dr. Furey.

The House approved a Board of Trustees announcement that Miami Beach will replace Chicago as place of the 1960 Annual Meeting, and New York will be the site of the 1961 Annual Meeting. Action was postponed on selection of the city for the 1962 Annual Meeting.

Rising votes of appreciation were given to Dr. Hamilton; Dr. George F. Lull, retiring secretary, and Dr. J. J. Moore, retiring treasurer.

At the Wednesday session of the House the Illinois State Medical Society made another record state society contribution to the American Medical Education Foundation by turning over a check for $177,500 to Dr. Lull, now foundation president.

F. J. L. Blasingame, M.D.
Executive Vice President
American Medical Association

Actions of Special Importance by A.M.A. House of Delegates

Basic Medical Rights of American Citizens

"***Resolved,*** That the House of Delegates approve the following principles:

"We, as physicians, cognizant that the American citizen enjoys certain basic rights as his heritage, and that these rights extend to the citizen in his position as a patient, do hereby recognize these basic medical rights:

"1. He should have the right to employ the physician of his choice and should be free to terminate the professional relationship at will, without bureaucratic or governmental domination; and

"2. He should have the right to know that his physician is responsible for all decisions regarding the extent of his medical care, and that these decisions are not dictated, restricted, or controlled by any third party; and further be it

"***Resolved,*** That the House of Delegates request the Board of Trustees and its representatives to publicize these principles as the basis for participation in any program of medical care."

* * *

Indigent Care

"That the American Medical Association request that any funds provided under the Public Assistance provisions of the Social Security Act for medical care of the indigent be administered by a voluntary agency such as Blue Shield on a cost plus basis or by a specific agency established by the medical society of the state in which indigent care is rendered."

* * *

Voluntary Health Agencies

Dealing with problems that have arisen in the raising and distributing of funds since development of the concept of united community effort, the House adopted the following statement offered in the form of amendments from the floor:

"1. That the House of Delegates reiterate its commendation and approval of the principal voluntary health agencies.

"2. That it is the firm belief of the American Medical Association that these agencies should be free to conduct their own programs of research, public and professional education and fund raising in their particular spheres of interest.

"3. That the House of Delegates respectfully requests that the American Medical Research Foundation take no action which would endanger the constructive activities of the national voluntary health agencies.

From the House of Delegates of the California Medical Association

SOCIALISM

Be It Resolved, **That the California Medical Association recognize government financed and administered medical plans as no different from governmental monopolistic operation of any industry; and be it further**

Resolved, **That the officers of the California Medical Association decline to bind its individual or collective members to any agreement with a bargaining third party, and be it further**

Resolved, **That the California Medical Association assert its belief in democracy, warn its membership of the deeply entrenched position of power with which all forms of government surround its electorate, and declare its support of intellectual and economic freedom for all men, including physicians.**

* * *

This statement of attitude, introduced by Frederic P. Shidler, San Mateo County Medical Society, was adopted by the House of Delegates at its meeting in April of this year.

"4. That the Board of Trustees continue actively its studies of these perplexing problems looking forward to their ultimate solution."

* * *

Inclusion of Physicians Under Social Security

"Whereas, Proposals for the inclusion of self-employed physicians in the Social Security System have been made repeatedly and are now pending before Congress and

"Whereas, The matter has been discussed several times before the A.M.A. House of Delegates and its reference committees, yet there remains the necessity of reiterating our position to members of Congress and to the general public that American physicians still strongly oppose being included in the Social Security System; and

"Whereas, American physicians always have stood on the principle of security through personal initiative; therefore be it

"***Resolved,*** That the House of Delegates of the American Medical Association unequivocally opposes the compulsory inclusion of self-employed physicians in the Social Security System."

* * *

Medicare

Resolution No. 1 refers to the repeal of Public Law 569—the Medicare Law. As this law contains a variety of methods of financing health care costs, it is the opinion of the Reference Committee on Legislation and Public Relations that the purposes stated in the second resolve of Resolution No. 1 could be accomplished through modification of the present implementing directives without the necessity for new legislation. Therefore, your reference committee recommends that Resolution No. 1 be not approved but that the action taken by this House of Delegates in New York in 1957 with respect to Resolution 19, which reads in part as follows, be reaffirmed:

"We . . . are recommending that the decision as to the type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination . . ."

In Memoriam

Brandon, John J. Died in Piedmont, June 25, 1958, aged 41, of heart disease. Graduate of Indiana University School of Medicine, Bloomington-Indianapolis, 1950. Licensed in California in 1951. Dr. Brandon was a member of the Alameda-Contra Costa Medical Association.

✣

Davis, Walter William. Died in Los Angeles, June 8, 1958, aged 48, of heart disease. Graduate of Meharry Medical College, Nashville, Tennessee, 1935. Licensed in California in 1943. Dr. Davis was a member of the Los Angeles County Medical Association.

✣

Kirk, Albert Wellington. Died in Berkeley, July 5, 1958, aged 88. Graduate of College of Physicians and Surgeons of San Francisco, 1900. Licensed in California in 1900. Dr. Kirk was a member of the San Francisco Medical Society.

✣

Landis, Charles Caldwell. Died in Loma Linda, March 10, 1958, aged 75. Graduate of George Washington University School of Medicine, Washington, D. C., 1912. Licensed in California in 1912. Dr. Landis was a member of the Butte-Glenn Medical Society.

✣

Lumsden, Arthur Gomez. Died in Petaluma, April 30, 1958, aged 75. Graduate of College of Physicians and Surgeons of San Francisco, 1906. Licensed in California in 1909. Dr. Lumsden was a member of the Sonoma County Medical Society.

✣

Newton, William C. Died June 6, 1958, aged 84. Graduate of Boston University School of Medicine, Massachusetts, 1896. Licensed in California in 1920. Doctor Newton was a retired member of the San Diego County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Nicholas, Constantin Z. Died in Del Mar, June 12, 1958, aged 66, of heart disease. Graduate of the University of Moscow Faculty of Medicine, Russia, 1916. Licensed in California in 1925. Doctor Nicholas was a member of the San Diego County Medical Society.

✣

Oppenheimer, Sali. Died in Oakland, June 5, 1958, aged 67. Graduate of the Universität Heidelberg Medizinische Fakultät, Baden, Germany, 1914. Licensed in California in 1941. Doctor Oppenheimer was a member of the Alameda-Contra Costa Medical Association.

✣

Pitkin, Horace Collins. Died in San Francisco, June 29, 1958, aged 60, of carcinoma of the lung. Graduate of Columbia University College of Physicians and Surgeons, New York, N. Y., 1924. Licensed in California in 1928. Doctor Pitkin was a member of the San Francisco Medical Society.

✣

Sobin, David J. Died in Los Angeles, June 14, 1958, aged 48, of cerebral hemorrhage. Graduate of Wayne University College of Medicine, Detroit, Michigan, 1937. Licensed in California in 1945. Doctor Sobin was a member of the Los Angeles County Medical Association.

✣

Taylor, Raymond G. Died in Los Angeles, June 28, 1958, aged 86. Graduate of University of Southern California School of Medicine, Los Angeles, 1896. Licensed in California in 1897. Dr. Taylor was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

von der Leith, Harold Otto. Died in Berkeley, June 7, 1958, aged 82. Graduate of Cooper Medical College, San Francisco, 1897. Licensed in California in 1898. Dr. von der Leith was a retired member of the San Francisco Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Walker, Joe Edmund. Died June 29, 1958, aged 57. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1925. Licensed in California in 1925. Dr. Walker was a member of the Los Angeles County Medical Association.

CALIFORNIA MEDICAL ASSOCIATION

Annual Meeting

Civic Auditorium

SAN FRANCISCO

February 22 to 25, 1959

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) no later than September 1, 1958.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association no later than September 1, 1958. (No exhibit shown in 1958, and no individual who had an exhibit at the 1958 session, will be eligible until 1960.)

Medical Motion Pictures

There will be facilities available for motion pictures. If you would like to exhibit a film, send your application to Dr. Paul D. Foster, 1930 Wilshire Boulevard, Los Angeles 57. The deadline is October 15, 1958.

SCIENTIFIC PAPERS
SCIENTIFIC EXHIBITS
MEDICAL MOTION PICTURES
PLANNING MAKES PERFECT
AN EARLY START HELPS

SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY	**George F. Harsh**	2001 Fourth Avenue, San Diego 1
ANESTHESIOLOGY	**Charles D. Anderson**	439 30th Street, Oakland 9
DERMATOLOGY AND SYPHILOLOGY	**Herbert L. Joseph**	607 Carolina Street, Vallejo
EAR, NOSE AND THROAT	**Ewing Seligman**	9735 Wilshire Boulevard, Beverly Hills
EYE	**A. Ray Irvine, Jr.**	2010 Wilshire Boulevard, Los Angeles 57
GENERAL PRACTICE	**James S. Eley**	624 Harris Street, Eureka
GENERAL SURGERY	**William F. Pollock**	2200 Santa Monica Boulevard, Santa Monica
INDUSTRIAL MEDICINE AND SURGERY	**Gandolph A. Prisinzano**	4041 H Street, Sacramento 19
INTERNAL MEDICINE	**Edward Shapiro**	123 North San Vicente Boulevard, Beverly Hills
OBSTETRICS AND GYNECOLOGY	**Donald R. Nelson**	2439 Ocean Avenue, San Francisco 27
ORTHOPEDICS	**Howard A. Mendelsohn**	415 North Camden Drive, Beverly Hills
PATHOLOGY AND BACTERIOLOGY	**Leo Kaplan**	8720 Beverly Boulevard, Los Angeles 48
PEDIATRICS	**Gordon L. Richardson**	10711 Riverside Drive, North Hollywood
PHYSICAL MEDICINE	**Carrie E. Chapman**	VA Hospital, 13th and Harrison Streets, Oakland 12
PSYCHIATRY AND NEUROLOGY	**John D. Moriarty**	7046 Hollywood Boulevard, Hollywood 28
PUBLIC HEALTH	**Carolyn B. Albrecht**	920 Grand Avenue, San Rafael
RADIOLOGY	**William H. Graham**	630 East Santa Clara Street, San Jose 12
UROLOGY	**Earl F. Nation**	112 North Madison Avenue, Pasadena 1

PUBLIC HEALTH REPORT

Increase in Arthropod-Borne Encephalitis a Possibility

MALCOLM H. MERRILL, M.D., M.P.H.
Director, State Department of Public Health

THE COMMUNICATION below is the first of what is intended as a continuing series of reports from the State of California Department of Public Health on topics of interest to physicians in private practice. On a number of occasions in the past, Dr. Malcolm H. Merrill, Director of Public Health, has appeared before the Council of the California Medical Association with intensely interesting reports on matters of public health and the attitudes and functions of the department. Since the minutes of the meetings of the Council give only the briefest of notes on such communications, Dr. Merrill was asked—and has agreed—to make use of this section of California Medicine for public health reports that can be informative and useful to all members.

WITH LARGE NUMBERS of mosquitos infesting the southern area of the San Joaquin Valley, it is likely that the incidence of arthropod-borne encephalitis this summer and fall will be higher than usual.

Violent storms in January and February, and the resulting heavy snow pack, runoff and floods, provided an ideal situation for mosquito breeding. Mosquitos in large numbers are found from Fresno County south, with Kern the epicenter of the infestation. A principal concern of the State Department of Public Health is the possibility of transmission to man of the Western equine and St. Louis encephalitides by Culex tarsalis. The Western equine organism has been identified in pools of mosquitos collected in fields, recreational areas and around homes.

With present knowledge it is not possible to predict accurately whether California will have a high or low number of cases of encephalitis in any given season. However, some of the ingredients for an above-average encephalitis season are in evidence this year—excessive water, high mosquito infestation and a susceptible human population.

Since 1919, acute encephalitis has been a reportable disease in California. During the 1952 outbreak, 410 cases of St. Louis and Western equine encephalitis were confirmed out of a total of 805 reported acute cases. In only one year since then, 1954, have there been over 100 cases of the arthropod-borne types identified, although each year since 1952 more than 350 clinically suspected cases have been reported.

It is obvious that it is not the number of cases of the arthropod-borne encephalitides that makes the matter one of major public health importance in California, but rather for the potential epidemic nature of the disease.

The seasonal activity of arthropod-borne encephalitis in humans in California has followed a rather consistent pattern year after year. Western equine cases may first appear in June, then both Western and St. Louis cases occur in July, August and September, with St. Louis predominating in September and continuing into October, after which no further cases occur until the following year.

Particularly vital to public health is the prevention and control of the disease. Much research remains to be done to bring this about. The attempt to control these arthropod-borne encephalitides has been primarily aimed at the reduction in numbers of the mosquito vector. Almost four million dollars is spent annually on mosquito control in the state. But even with the combined efforts of the department's Bureau of Vector Control and the more than 50 local abatement agencies, considerable numbers of Culex tarsalis escape, and it seems apparent that eradication of this species is not likely to be accomplished.

The problem of control is intensified in years such as this, when personnel of local abatement agencies work overtime in efforts to reduce swarming mosquito infestation.

The alternative approach to control is the protection of humans. This can be approached in either of two ways: Physically protecting the human from the bite of the mosquito by the well known and accepted methods of repellents, mosquito netting and screening of homes, or artificially inducing in the host some immunity to the viruses involved.

This latter method has received considerable discussion, particularly as to why such a vaccine is not available for human use, since there is an acceptable Western equine vaccine for horses. The problems involved here are both administrative and economic. It would be difficult to know to whom the vaccine should be given, whether it would need to be repeated each year and whether the cost of the vaccine and its administration would be greater than warranted in view of the relatively few human cases of these diseases.

In California this is a particular problem due to the vast number of migrant laborers who move through the Central Valley during the encephalitis season. And to be administratively feasible, a vaccine including both Western and St. Louis antigens would be required.

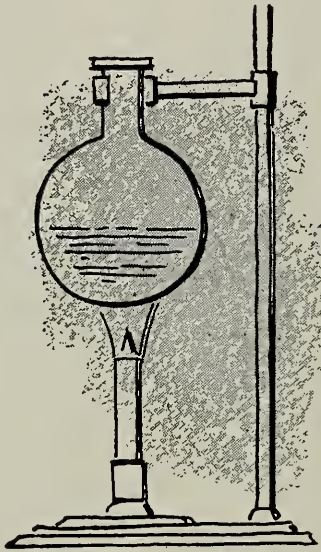
If a vaccine for humans were available, especially for Western equine, it might be possible to selectively immunize mothers during pregnancy, or newborn infants, so that the particularly high attack rate in infants under one year of age might be reduced. Selective use of the vaccine in this manner might be highly desirable. However, its use on a mass basis would seem, at the moment, to be unproductive and uneconomical. Furthermore, it must be recognized that only a small proportion of diagnosed cases of encephalitis is caused by these specific viral agencies.

Should there be a sharp rise in the incidence of encephalitis this summer and fall, private physicians could be extremely helpful to state and local health and research agencies by:

1. Prompt reporting of cases of suspected encephalitis to the local health department and collecting appropriate specimens for etiological diagnosis. The specimens should be sent either to the local health department or directly to the State Health Department's Viral and Rickettsial Disease Laboratory in Berkeley, depending upon local agency policy.

2. Being alert to the possibility of an increase in cases of encephalitis, not only in residents of the Central Valley but in patients who recently traveled through or camped in the valley.

3. Suggesting to patients who plan traveling through or visiting the valley to pay particular attention this year to the use of repellents and mosquito netting, especially toward dusk when Culex tarsalis prefers to feed.



WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

We returned from the 35th Annual Convention of the Woman's Auxiliary to the American Medical Association held in San Francisco in June with renewed interest.

Nearly 78,000 members who devote their valuable time and their efforts in support of an established program were represented by some 1,200 registered members including national officers, state presidents, presidents-elect, and state delegates and alternates.

A resume of our accomplishments on the county level as presented to the House of Delegates by state presidents, reaffirmed our conviction that in any undertaking a definite aim must be established and a program planned to support that aim.

We learned that it is not only the California Auxiliary that believes in the ideas and ideals of the American Medical Association, but that we are part of a team of doctors' wives upon whose shoulders rest the obligation of leadership in community health over the entire nation.

Nothing new is added to the program this year. Reevaluation, with special emphasis where needed, and an all-out effort will be placed behind the projects already under development to increase their effectiveness.

The fact that more legislative bills with medico-economic implications are introduced to Congress than any other type of legislation is proof of public interest in health.

The county auxiliaries must be kept informed to enable them to render a real community service by sponsoring health forums featuring speakers on medical subjects of local interest and general health education.

The cooperation of the county medical societies is necessary to the educational program. Clearance of speakers on medical subjects and medical legislation through the society is a must. All county auxiliary presidents and program chairmen are repeatedly alerted to check frequently with their county society advisory board and to clear speakers or to obtain speakers through the local Medical Speakers' Bureau.

Our greatest strength is in developing better understanding and public interest, community by community. The combined strength of the 34 counties and seven districts in California was revealed in the collective report of work done and activities participated in as compiled by Mrs. Offield, our immediate past president. The statistics were a credit to every California unit and, added to the reports of some 1,300 counties as given by the state presidents, the national officers' reports were almost unbelievable.

One report that we are certain you will be interested in was the amount contributed to the American Medical Education Foundation—nearly $126,000. We are proud of that feat and we know you are too.

As in all organizations where large numbers of people are concerned, there must be a means of coordination to unify efforts and decide policy. We have our state and national auxiliaries under the direction of our parent societies, the local, state and national medical associations.

In September, our California Auxiliary will hold the regular fall conference of county presidents, presidents-elect, district chairmen, state officers including district councilors, councilors at large and standing and special committee chairmen.

This is a workshop meeting, designed to discuss freely the desires and needs of the individual counties and to arrive at conclusions through which we can continue to be of the most effective service to our societies. With the aid of experienced state officers, past state presidents and members of the California Medical Association, we will become informed on the policies and objectives of auxiliary work through which we produce the results that make for reports such as were given at the recent national convention.

In October the conference of state presidents and presidents-elect with national officers and committee chairmen will be held again in Chicago. The same principle is involved as on the state level, with the result that all officers are indoctrinated with proper procedures and knowledge of policies.

Enthusiasm and respect for the principles of what we are doing is a great motivating force which we gain by the exchange of ideas, and these ideas we pass on to the back-home members who produce the efforts necessary to achieve our goals.

Dr. Gunnar Gundersen, president of the American Medical Association, in his inaugural address said:

"Medicine can play a vitally effective part in bringing reality to the dream of world peace.

"Medicine, despite the designs of politicians or dictators, is above the harsh conflict of ideologies and power politics.

"Medicine, like religion, speaks a universal language which passes all barriers of creed, race, color and nationality. The brightest chapter in the international story since World War II is that on health and medicine.

"As Americans, our first duty is to this country, but as members of a civilization which believes in the brotherhood of man, we also have a duty toward all men who yearn for freedom, dignity, peace and health.

"Physicians in America should never forget their responsibilities to all humanity or neglect their opportunities to promote the brotherhood of man."

Mrs. Newell Jones
President, Woman's Auxiliary to the California Medical Association

Medical Jurisprudence . . .

Practice of Medicine; Delegation of Duties

HOWARD HASSARD
Peart, Baraty & Hassard

The modern practice of medicine necessitates the use by physicians of many aids, including technicians in various specialties. A physician must rely not only on the nursing profession but also on laboratory technicians, x-ray technicians, physical therapists and others. None of these assistants are licensed to practice medicine and surgery, although some—clinical laboratory technicians and physical therapists for example—are licensed for limited purposes within their own functional areas.

A license, whether to practice medicine, law, dentistry or other profession or occupation, confers a personal privilege that is not transferable. Furthermore, as to medicine the Medical Practice Act (Business & Professions Code, Section 2392) forbids a licensed physician to employ an unlicensed person "in the practice of any system or mode of treating the sick or afflicted" (penalty for infringement may be loss of license). The section also forbids "the aiding or abetting of any unlicensed person to practice any system or mode of treating the sick or afflicted."

In view of the nontransferability of a medical license, and in view of the prohibitions against employing unlicensed personnel to practice medicine, or aiding or abetting unlicensed personnel to practice medicine, the question naturally arises: What specific functions may be lawfully delegated by a physician to an assistant, nurse, technician or other person who is not a licensed physician?

Some but not all of the commonly delegated duties have been the subject of court interpretation. For example, more than twenty years ago the California Supreme Court held that a surgeon may lawfully delegate to a nurse the administration of general anesthesia (*Chalmers Francis vs. Nelson,* 6 Cal. (2d) 402). The court recognized that anesthesia is a part of the practice of medicine, but reasoned that the surgeon is in full charge in the operating room and may, at his own risk, delegate functions as he chooses.

In April of this year another case was decided that fills in considerably the preexisting gaps in the determination of what may or may not be delegated to a non-physician. The case is interesting in several respects.

It involved an osteopathic physician and surgeon who took referrals from a chiropractor. The chiropractor referred an obstetrical case to the osteopath, and the osteopath invited the chiropractor to be present during delivery. After the infant was delivered the osteopath requested the chiropractor to suture a laceration about 2 cm. long on the left side of the vestibule of the vagina, which the chiropractor did. Later the Board of Osteopathic Examiners suspended the osteopath's license for aiding and abetting an unlicensed practitioner to practice medicine and surgery. Admittedly, the chiropractor had never had any instruction in his chiropractic school in the use of a suturing needle, and admittedly the chiropractic initiative act prohibits surgery by chiropractors. The osteopath appealed to the courts, but his suspension was upheld (*Newhouse vs. Board of Osteopathic Examiners,* 159 A.C.A. 828).

The court said that to constitute "practice" of medicine or surgery it was not necessary to establish a series of acts or that the person accused held himself out to the public as being engaged in rendering medical or surgical services. The single act of suturing the wound was held to constitute "practice" within the meaning of the prohibition in the Medical Practice Act against employing unlicensed persons or aiding and abetting unlicensed persons.

The court further said that inserting a needle constitutes penetration of tissue, which is the practice of medicine and surgery, and that the osteopath directed the chiropractor in the performance of a procedure for which the chiropractor was not licensed, and that therefore the osteopath aided and abetted an unlawful act.

Finally, the court distinguished between a disciplinary proceeding by the licensing board and a criminal action against the unlicensed person. The court said that in such a criminal action an isolated act by an unlicensed person under the supervision of a licensed practitioner would *not* constitute the "practice" of medicine.

This seems to lay down two standards of conduct —one for the licensed physician and the other for the unlicensed person.

The rule of the *Newhouse* case is applicable whether a physician aids and abets an independent individual, such as a chiropractor, or employs a person to perform medical or surgical procedures. The same section of the Medical Practice Act forbids both employment and aiding and abetting.

Earlier cases in California have held that a clinical laboratory technologist cannot employ unli-

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Legal Counsel, California Medical Association.

censed personnel to perform prenatal examinations (*Cooper vs. State Board of Health*, 102 Cal. App. (2d) 926); and that a physician acting as medical director of a county hospital cannot employ as interns and residents in the hospital unlicensed physicians (*Rilcoff vs. State Bd. of Med. Exam.*, 90 Cal. App. (2d) 603).

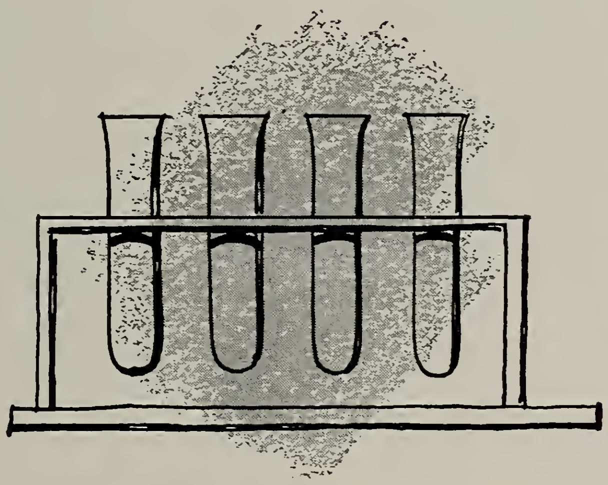
While a literal application of the Medical Practice Act would prohibit the delegation of any medical function to a non-physician assistant, it is quite obvious that reason forbids any such literal interpretation. Bear in mind that any penetration of tissue is the practice of medicine; that any therapeutic treatment is the practice of medicine; and that any diagnostic procedure is the practice of medicine.

That the courts will follow a rule of reason is evidenced by the *Chalmers Francis* case, in which a nurse anesthetist was held not to be unlawfully engaged in the practice of medicine when acting under the supervision of the operating surgeon.

Another example is *Sherman vs. Hartman*, 137 Cal. App. (2d) 589, where the court held that a physician who had *started* a transfusion could lawfully leave the patient in charge of a registered nurse. The court said: "Defendant (the doctor), finding that the transfusion was working properly in accordance with good medical practice, left the patient in the hands of a registered nurse. . . . He had the right to "assume that, being a registered nurse . . . she had the requisite training and knowledge to perform the simple act of watching the transfusion and seeing that if the needle slipped . . . the dripping of blood was stopped and a doctor called. . . ." (Actually, the nurse went to lunch and sub-delegated the task to an orderly! He failed to act promptly when the needle slipped.)

However, application of a rule of reason does not mean that wholesale, unnecessary or publicly undesirable delegations of duties by a licensed physician will be condoned.

When faced with the necessity of deciding whether an act is or is not unlawful, the courts are very likely to be guided by established custom, particularly the practices followed in teaching institutions, accredited hospitals and the like. A physician who delegates to an office assistant or other unlicensed person functions that his colleagues do not delegate or do not consider safe to delegate, is running the risk of legal charges of several types, including disciplinary action by the Board of Medical Examiners.



NEWS & NOTES

NATIONAL · STATE · COUNTY

ALAMEDA

Dr. Robert Dyar, chief of the division of preventive medical services, California State Department of Public Health, became the president of the Western Branch of the American Public Health Association at the association's annual meeting in Vancouver, B. C.

* * *

Construction was begun last month on the **Bruce Lyon Memorial Research Laboratory** at Children's Hospital of the East Bay in Oakland. The laboratory is a memorial to a son of Mr. and Mrs. Harvey B. Lyon who was killed in World War II. It is expected to be completed by the end of this year at a cost of $262,000.

Funds for the building of the laboratory, over the $100,000 given by the Lyon family and the $75,000 by the National Institutes of Health, will be obtained from bequests left to Children's Hospital of the East Bay from specific grants or donations for research.

LOS ANGELES

As a memorial to the late **Dr. Ewing L. Turner,** a past president of the Los Angeles County Medical Association, the physicians' division of the American Bureau for Medical Aid for Free China will send a gift of vitally needed medical equipment to Formosa. Dr. Turner, who had served in the Far East during World War II, was a member of the executive board of the bureau that is making the gift.

* * *

An overflow crowd of Red Cross officials and Beverly Hills civic leaders attended a luncheon given in honor of **Dr. James C. Doyle,** Speaker of the California Medical Association House of Delegates, on the occasion of his retirement as chairman of the Beverly Hills Branch of the American National Red Cross early last month. Dr. Doyle was presented with a plaque in commemoration of his ten years of chairmanship.

MARIN

Dr. Martin H. Long of Mill Valley was awarded first prize in the exhibit of the American Physicians' Art Association which was held during the American Medical Association Convention in San Francisco. The prize was for his pastel study of the head of a Negro man.

SAN FRANCISCO

The California Academy of General Practice will present its Tenth Annual Scientific Assembly at the new Masonic Memorial Temple on Nob Hill in San Francisco, October 5 to 8, 1958. The meeting is expected to attract some 2,500 family doctors and their wives from the Western states.

The entire emphasis will be on presenting useful, practical material that can be put into immediate use in the doctor's everyday practice, the announcement of the meeting said. Among topics to be discussed will be neglected feet in children, teenage sex education, reactions to antibiotics, obstetrical problems, inguinal hernia repair, psychotherapy, otitis, general principles in skin diagnosis, small bone fractures, back manipulations, common sense fluid balance, use of diuretics, pruritis ani, the acute abdomen in the aged, diabetes, angina and a pediatric panel on routine care, emergencies and fever of unknown origin.

Out-of-state physicians chosen to appear at the assembly are Robert N. Rutherford, Seattle; Ethan A. Brown, Boston; C. H. Hardin Branch, Salt Lake City; William H. Gordon, Lubbock, Texas; Philip Thorek, Chicago; and Ralph C. Benson, Portland.

* * *

Dr. Seymour M. Farber of San Francisco was elected president-elect of the American College of Chest Physicians at its meeting in San Francisco in June.

* * *

Dr. Edward B. Shaw, San Francisco, has been appointed professor of pediatrics and chairman of that department in the University of California School of Medicine.

Dr. Shaw, who has been a volunteer member of the school's part-time clinical faculty since 1921, now is leaving private practice to devote full time to his new job. He succeeds Dr. William C. Deamer as chairman of the department. Dr. Deamer intends to devote more time to research and training.

SONOMA

Announcement of a grant of $4,800 by Wyeth Laboratories to **Dr. John L. Karlsson** of Santa Rosa for a two-year residency in pediatrics at Children's Hospital, San Francisco, was made recently by Dr. Crawford Bost, who is a member of the Wyeth Fellowship committee.

TULARE

Dr. Hugh M. Baca of Visalia was reelected president of the Tulare County Heart Association at the annual meeting of the organization in June, and **Dr. Arthur Carleton** of Lindsay was elected vice-president.

GENERAL

Problems created by the nuclear age and the latest developments in the surgical specialties will be emphasized at the **western regional congress** of the United States section, **International College of Surgeons,** to be held at the Riverside Hotel, Reno, August 21 to 23. The meeting will be open to all physicians, whether or not members of the International College of Surgeons.

The opening day will feature a panel covering the surgical problems encountered in general practice. The moderator will be Dr. Ross T. McIntire, Chicago.

Additional information may be obtained from Dr. Fred M. Anderson, 275 Hill Street, Reno, general chairman of the meeting.

* * *

Among 81 grants totalling $1,098,680 awarded by the Life Insurance Medical Research Fund in support of **heart research** during the coming year, three for a total of $59,950 will go to aid research in three California medical schools: Stanford University School of Medicine, San Francisco, $26,400 for research by **Dr. Victor Richards** on circulatory dynamics with reference to surgical treatment; University of California School of Medicine, Los Angeles, $17,050, for research by **Dr. W. F. H. M. Mommaerts** on the molecular structure of muscular tissues; and University of Southern California School of Medicine, Los Angeles, $16,500 for research by **Dr. John L. Webb** on cardiac cell membrane potentials in relation to contractility of the heart muscle.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Internal Medicine (at University of California Residential Conference Center, Lake Arrowhead), Wednesday through Saturday, August 20 to 23. Sixteen hours. Fee $150.00 (including room and meals).

Anesthesiology. Wednesday through Friday, August 27 through August 29. Sixteen hours. Fee: $50.00.

Workshop for Food Service Workers I. Monday and Tuesday, September 15 and 16. Twelve hours. Fee: $15.00 includes luncheons.

Calculations in Clinical Chemistry. Wednesdays, September 17 through October 22. Twelve hours. Fee: $25.00.

Medical Terminology. Thursday nights, beginning September 18. Forty-five hours. Fee: $30.00.

Teaching Clinics. Thursdays, September 18 to December 11. Twenty-four hours.*

St. Joseph Hospital, Burbank, Postgraduate Medical Lecture Series. Tuesdays, September 23 to December 9. Twenty-four hours. Fee: $50.00.

Practical Clinical Chemistry for Laboratory Technologists. Begins in October. Twenty-four hours.*

Aviation Medicine. Wednesday, Thursday and Friday, October 22, 23 and 24. Nineteen hours.*

Removal of Foreign Bodies from Lung and Bronchi. Saturday and Sunday, November 8 and 9. Nine hours. Fee: $110.00.

Minor Surgery. Friday and Saturday, November 14 and 15. Twelve hours.*

Obstetrics and Gynecology. Friday and Saturday, November 21 and 22.†

Fractures. Friday and Saturday, December 5 and 6.†

Vascular Surgery. Friday and Saturday, December 12 and 13.†

Athletic Injuries. Friday and Saturday, December 19 and 20.†

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Internal Medicine. Saturday through Wednesday, September 13 through September 17. Thirty-five hours.*

Medical Evening Series (East Oakland Hospital). Tuesdays, September 16 through December 9. Twenty-four hours. Fee: $50.00.

Obstetrics and Gynecology. Thursday through Saturday, September 18 through September 20. Twenty-one hours. Fee: $50.00.

Congenital Abnormalities. (Saturday morning sessions) October 4 through November 8. Fifteen hours.*

Psychiatric Orientation for General Practice (Herrick Hospital, Berkeley). Sunday through Tuesday, October 26 through October 28. Twenty-one hours. Fee: $50.00.

Arthritis and Rheumatoid Diseases. Monday through Wednesday, November 3 through November 5. Twenty-one hours.*

Urology. Friday, November 7. Seven hours. Fee: $20.00.

Proctology. Saturday, November 8. Seven hours. Fee: $20.00.

Heart Symposium (Santa Rosa). Wednesday, November 12. Seven hours. Fee: $15.00.

Plastic Surgery. Thursday, November 13. Seven hours. Fee: $20.00.

Hand Surgery. Friday, November 14. Seven hours. Fee: $20.00.

New Look in Speech Problems. Saturday, November 15. Seven hours. Fee: $12.50.

Ophthalmology — External Diseases. Wednesday through Saturday, December 3 through December 6. Twenty-eight hours.*

Postgraduate Clinics in Dermatology. Friday and Saturday, January 16 and 17. Fourteen hours. Fee: $40.00.

Course for Physicians in General Practice. Monday through Friday, April 6 through April 10. Thirty-five hours. Fee: $75.00.

Fundamental Principles of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Postgraduate Instruction, Office of Medical Extension, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Division of Ophthalmology will present a course in Strabismus, consisting of lectures, demonstrations and seminars. Enrollment limited. August 27 through August 30.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year Postgraduate Series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

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*Fees to be announced.

†Fees and hours to be announced.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Intensive Review of Internal Medicine. September 22 through October 3. Course designed for the Internist. Emphasis placed on review of important fundamentals as well as recent advances in field of internal medicine. Program is scheduled just prior to Part I of American Board of Internal Medicine examination. Tuition: $65.00.

Bedside Clinics and Set Clinics in Internal Medicine. October 2 through January 15, 1959. Small groups will study and examine interesting patients at bedside. Discussion of physical findings as well as diagnostic and therapeutic measures, ECG and x-rays will be conducted by instructor. Tuition: $65.00. Los Angeles County Hospital.

Therapeutic Interviewing of Patients with Emotional Problems. October 15 through January 8, 1959. Course designed for practicing physician. After general orientation, meetings will be based upon tape recordings of interviews with patients made by participating physicians. Tuition: $100.00. Los Angeles County Hospital, Psychiatric Unit.

Homecoming Course. October 16 and 17. Two-day refresher course to cover advances in diagnosis and treatment developed in last five years. Tuition: Alumni, $25.00; Non-alumni, $50.00.

Symposium on Sexual Problems as Seen in General Practice. November 7. Tuition: $25.00. Hotel Statler, Los Angeles.

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Audio-Visual Postgraduate Refresher Courses. Courses are made up of four or more half-hour lectures each, recorded on hi-fi magnetic tape and illustrated by 35-mm. filmstrips or slides in full color, and adapted for use on any standard tape recorder and filmstrip or slide projector, automatic or manual.

Contact: Paul D. Foster, M.D., chairman, Committee on Audio-Visual Courses, College of Medical Evangelists School of Medicine, 316 North Bailey St., Los Angeles 33.

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Begins September 8. Surgical Anatomy (72 periods, 324 hours). Dissection, Lectures and Demonstrations. September 8, 1958 through June 3, 1959. Tuition: $250.00. Upper and Lower Extremities (31 periods, 140 hours), September 8, 1958 through January 5, 1959. Tuition: $125.00. Thorax, Abdomen and Pelvis (27 periods, 121 hours), January 7 through April 15, 1959. Tuition: $125.00. Head and Neck (14 periods, 63 hours), April 22 through June 3, 1959. Tuition: $75.00.

Begins September 10. Surgical Anatomy (41 periods, 82 hours). Lectures and Demonstrations. September 10, 1958 through June 3, 1959. Tuition: $100.00. Upper and Lower Extremities (15 periods, 30 hours), September 10 through December 17, 1958. Tuition: $50.00. Thorax, Abdomen and Pelvis (14 periods, 28 hours), January 7 through April 15, 1959. Tuition: $50.00. Head and Neck (12 periods, 24 hours), April 22 through June 3, 1959. Tuition: $35.00.

Begins September 9. Surgical Pathology (36 periods, 108 hours), September 9, 1958 through June 2, 1959. Tuition: $100.00.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE CIRCUIT COURSES

Sacramento Valley Circuit for Dunsmuir, Chico, Marysville and Auburn, in cooperation with Stanford University School of Medicine begins week of October 13, 1958.

North Coast Circuit for Eureka, Ukiah and Napa, in cooperation with University of California, San Francisco, begins week of October 13, 1958.

West Coast Circuit in cooperation with College of Medical Evangelists. San Luis Obispo and Santa Maria, November 12; Ojai, November 13.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel Californian, Fresno. (Local chairman not yet appointed.)

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25, 26 and 27, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

* * *

Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued on November 1, 1958. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

AUGUST MEETING

Western Regional Meeting, International College of Surgeons, Riverside Hotel, Reno, Nevada, August 21 to 23. *Contact:* Leo D. Nannini, M.D., 190 Mill Street, Reno, Nevada. For reservations, write Riverside Hotel, Reno, Nevada.

SEPTEMBER MEETINGS

Oregon State Medical Society 84th Annual Session, September 3 to 5, Masonic Temple, Portland. *Contact:* Roscoe K. Miller, executive secretary, 1115 S. W. Taylor St., Portland 5, Oregon.

Saint John's Hospital Postgraduate Assembly, September 11 through September 14, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 22nd St. at Santa Monica Blvd., Santa Monica.

Stockton Postgraduate Study Club 20th Annual Fall Series, September 11 to November 13, 8 p.m., College of Pacific Campus, Stockton. *Contact:* John F. Blinn, Jr., M.D., chairman, 936 N. Commerce St., Stockton.

Washington State Medical Association Annual Convention, September 14 to 17, 1958, Spokane, Washington. *Contact:* Ralph W. Neill, executive secretary, 1309 Seventh Ave., Seattle, Wash.

Southwestern Pediatric Society, Dinner Meetings, September 17, November 19 and January 14, University Club, 6:30 p.m., Los Angeles. *Contact:* Robert Shirley, M.D., secretary-treasurer, 11633 San Vicente Blvd., Los Angeles 49.

Twelfth Annual Postgraduate Assembly, September 17 and 18, San Diego County General Hospital, San Diego. *Contact:* William T. Nute, executive secretary, San Diego County Medical Society, 3427 Fourth Avenue, San Diego 3.

Nevada State Medical Association Annual Meeting, September 17 through 20, Elko, Nevada. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Pacific Dermatologic Association Tenth Annual Meeting, September 18 through 20, Hotel del Coronado, Coronado, Calif. *Contact:* Louis H. Winer, M.D., secretary-treasurer, 9915 Santa Monica Blvd., Beverly Hills, Calif.

Colorado State Medical Society Annual Session, September 24 through 27, Broadmoor Hotel, Colorado Springs. *Contact:* Harvey T. Sethman, executive secretary, 835 Republic Bldg., Denver 2.

OCTOBER MEETINGS

California Division of the American Cancer Society Annual Meeting, October 1 to 4, Fairmont Hotel, San Francisco. On Wednesday, October 1, afternoon and evening, will be a cancer conference held for entire medical profession. *Contact:* Walter E. Batchelder, M.D., medical director, C.M.A. Cancer Commission, 450 Sutter St., San Francisco 8.

1958 Western Industrial Health Conference sponsored by the Western Industrial Medical Association, October 3 to 5, Claremont Hotel, Berkeley. *Contact:* John E. Kirkpatrick, M.D., 516 Sutter St., San Francisco 2; or A. C. Remington, M.D., 9851 Sepulveda Blvd., Los Angeles 45.

California Academy of General Practice Tenth Annual Scientific Assembly, October 5 to 8, Masonic Temple, San Francisco. *Contact:* William W. Rogers, executive secretary, 461 Market Street, San Francisco 5.

Kaiser Foundation Hospitals of Northern California Symposium on Viruses and Viral Disease, October 10 and 11, Hotel Fairmont, Gold Room, San Francisco. All physicians and medical students are invited, without fee. *Contact:* Martin A. Shearn, M.D., director of education, Kaiser Foundation Hospital, 280 W. MacArthur Blvd., Oakland, Calif.

Fifth Annual Fort Miley Surgical Clinics and Symposia sponsored by the San Francisco Academy of General Practice in cooperation with Faculties of Stanford University School of Medicine and University of California School of Medicine at Fort Miley Veterans Administration Hospital, 42nd Avenue and Clement Street, San Francisco, will start on October 14, 1958 at 8 p.m. and each Tuesday thereafter ending November 18, 1958. *Contact:* Alexander F. Fraser, M.D., 3490 20th Street, San Francisco.

California Society of Internal Medicine Annual Meeting, October 17 to 19, Ahwahnee Hotel, Yosemite. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Dr. Clyde C. Greene, secretary-treasurer, 350 Post St., San Francisco 8.

American Heart Association Scientific Sessions and Meetings, October 24 to 28, Fairmont Hotel and Civic Auditorium, San Francisco. *Contact:* J. Keith Thwaites, executive director, California Heart Association, 1428 Bush Street, San Francisco 9.

Los Angeles County Heart Association 28th Annual Professional Symposium, October 29 and 30, Wilshire Ebell Theater. *Contact:* Los Angeles County Heart Association, 660 S. Western Ave., Los Angeles 5, DUnkirk 5-4231.

Hawaii Heart Association, Inc. Special Cardiological Sessions, October 30 through November 1, Princess Kaiulani Hotel, Honolulu. *Contact:* Alfred S. Hartwell, M.D., c/o Hawaii Heart Association, 1018 Lunalilo St., Honolulu.

San Diego County Heart Association 8th Annual Symposium on Heart Diseases, all day, October 31, U. S. Naval Hospital Auditorium, San Diego. *Contact:* O. M. Avison, executive director, San Diego County Heart Association, 1651 Fourth Ave., San Diego, BElmont 4-5101.

THE PHYSICIAN'S *Bookshelf*

PSYCHOPATHOLOGY OF COMMUNICATION—Edited by Paul H. Hoch, M.D., and Joseph Zubin, Ph.D., New York State Psychiatric Institute; Columbia University. Proceedings of the 46th annual meeting of the American Psychopathological Association, New York City, June, 1956. Grune and Stratton, New York, 1958. 305 pages, $6.75.

This book, formed from the collection of papers given at the 46th meeting of the American Psychopathological Association, has as its laudable purpose the focusing of attention upon the hitherto neglected field of communication considered as both a means of interpersonal relationship and as an adaptive mechanism. Particular attention is paid to the communication which takes place in the interview situation and also to the changes in the communicative process evinced in a variety of pathological processes.

In the opinion of the reviewer, this desirable objective was not fulfilled by this book. The volume gives the impression of a tatterdemalion hodgepodge and it is difficult to see why some of the contributions have been included or what direct relevance they have to the phenomenon of communication pathology. Moreover, it was particularly disappointing to see that none of the selections explored the phenomenon of paleologic irrationality as it is manifested in interpersonal communication and the sizable role which it plays in verbal and non-verbal interaction.

Moreover, the book shows the all too common defect of compilations from a set of papers given at a meeting. It lacks cohesiveness, integration, and complete coverage of the field, and in the opinion of the reviewer is a book recommended for perusal but not for purchase.

Charles W. Wahl, M.D.

* * *

THE EXTENT OF CANCER ILLNESS IN THE UNITED STATES—By the Biometry Branch of the National Cancer Institute, Dr. Michael B. Shimkin, Chief of the Branch. Public Health Service Publication No. 547. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 23 pages, 25c.

Cancer is a disease found in all races and ages of man, and apparently all animal species. There are, however, marked differences in the occurrence of cancer by type and by site, from species to species, and in different countries. The distribution of the specific forms of cancer appears to be influenced by a variety of factors, including age, sex, race, familial history and exposure to potential carcinogens. The long intervals between exposure to such agents and the development of disease may conceal the nature of causal relationships.

This small monograph attempts to answer 31 questions pertaining to the extent of cancer illness in the United States by means of brief text, charts and tables. The data comes from mortality statistics of the National Office of Vital Statistics, morbidity surveys conducted by the National Cancer Institute, and data accumulated by the Connecticut State Cancer Registry. Dr. John R. Heller, Director of the National Cancer Institute, reminds us in the foreword that mortality data are not precise, and that there is not complete agreement amongst pathologists as to the nature of many borderline neoplastic conditions. However, despite these limitations, a reasonably reliable estimate of the extent of cancer illness and trends therein can be made from the data at hand.

To eliminate the effect of differences in age of the population, many of the tables and charts have been adjusted, taking the 1950 census population of the United States as standard.

Since 1937, cancer has been the second leading cause of death in the United States, and the death rate is apparently increasing slightly. The probability of a person in the U. S. developing cancer is roughly 1 in 4, and of dying of cancer roughly 1 in 8. The digestive system accounts for the greatest proportion of cancer deaths in each sex, being followed by the respiratory tract and genital organs in males, and the genital organs and breasts in females.

There are a series of charts and curves showing the survival of cancer patients according to site and sex. There is brief reference to survival data and cure data following surgical treatment, radiological treatment, and a combination of these two curative methods. The author wisely points out that comparison of surgical and radiological data in the tables is not valid since the surgical group includes a much lower proportion of poor risk patients.

Improvements in survival rates have been noted for several primary sites, including cervix and corpus uteri, colon and rectum. However, survival prospects for many other sites such as stomach, lung and breast have remained virtually unchanged.

The vast amount of data compressed in these tables should be of value to physicians, cancer educators, and persons concerned with the impact of cancer on large population groups.

L. H. Garland, M.B.

* * *

A MANUAL OF ELECTROTHERAPY—Arthur L. Watkins, M.D., Assistant Clinical Professor of Medicine, Harvard Medical School. Lea & Febiger, Philadelphia, 1958. 259 pages, $5.00.

This is a new book, a first edition, by the present author. However, it is based, both in text and in illustrations, on a previous book of the late Dr. Richard Kovacs, which was entitled "A Manual of Physical Therapy."

The present author has confined the voluminous aspects of physical therapy to the facet of electrotherapy. This would include the subjects of heat, light, and electricity for certain muscle testing, electrical stimulation, ion transfer, etc. It is an excellent basic test for students of physical therapy and would be useful to physicians who are interested in a reference text in this field. The material covers both the physics, the physiological effects, safety rules, and actual methods of use. Clinical conditions are not discussed in this book.

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Eisenhower Proud of His Success as a Father

"Having made the grade as Dad" is described by President Dwight D. Eisenhower as his greatest personal triumph.

Proof of this, says an article appearing in the June issue of *Today's Health,* a publication of the American Medical Association, is his son John who practices on his own children what he learned from his father.

Today, the article points out, too many fathers are so engrossed in their work that they fail to give their children the necessary guidance.

Not so of President Eisenhower. "During his busiest hours, he always made time for his only child."

This wasn't always easy, since Army assignments took Dwight Eisenhower to all parts of the world during history's stormiest periods. Despite this, he always managed to phone or write to his son.

From what he learned from his father, John Eisenhower feels that giving a child expensive toys or just sending him to the best schools isn't nearly as important as a father giving of himself.

"I learned from Dad that it is much more important to listen, talk to, and share experiences with your children," said John. "This is probably the greatest gift that Dad gave to me and I'm trying to pass it on to our own kids."

Now an Army major at the Pentagon's Joint War Plans Division, the son of the President lives with his wife Barbara and their four children in Alexandria, Virginia.

John feels that as an only child he was controlled more than children in large families. "Dad may have been strict with me at the time . . . but he was never unfair and he was always consistent," the article quoted John as saying.

Like all wise parents, Ike is a strong believer in self-determination, and taught his son how, not what to think.

After high school, John debated whether to become a journalist, a lawyer, or a soldier. Realistically, his father warned of the disadvantages of Army life. In the end, however, John decided on a military career.

"Dad helped me to make up my mind and naturally he was pleased when I told him I was going to try for West Point. But the decision was entirely my own," John said.

During his marriage and Army career, Major Eisenhower has continued his comradeship with his father. While he has made his military way on his own merits, he has occasionally sought fatherly advice.

(Continued on Page 54)

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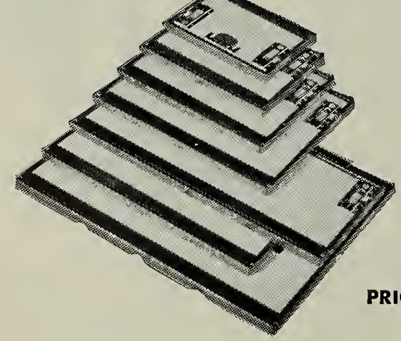

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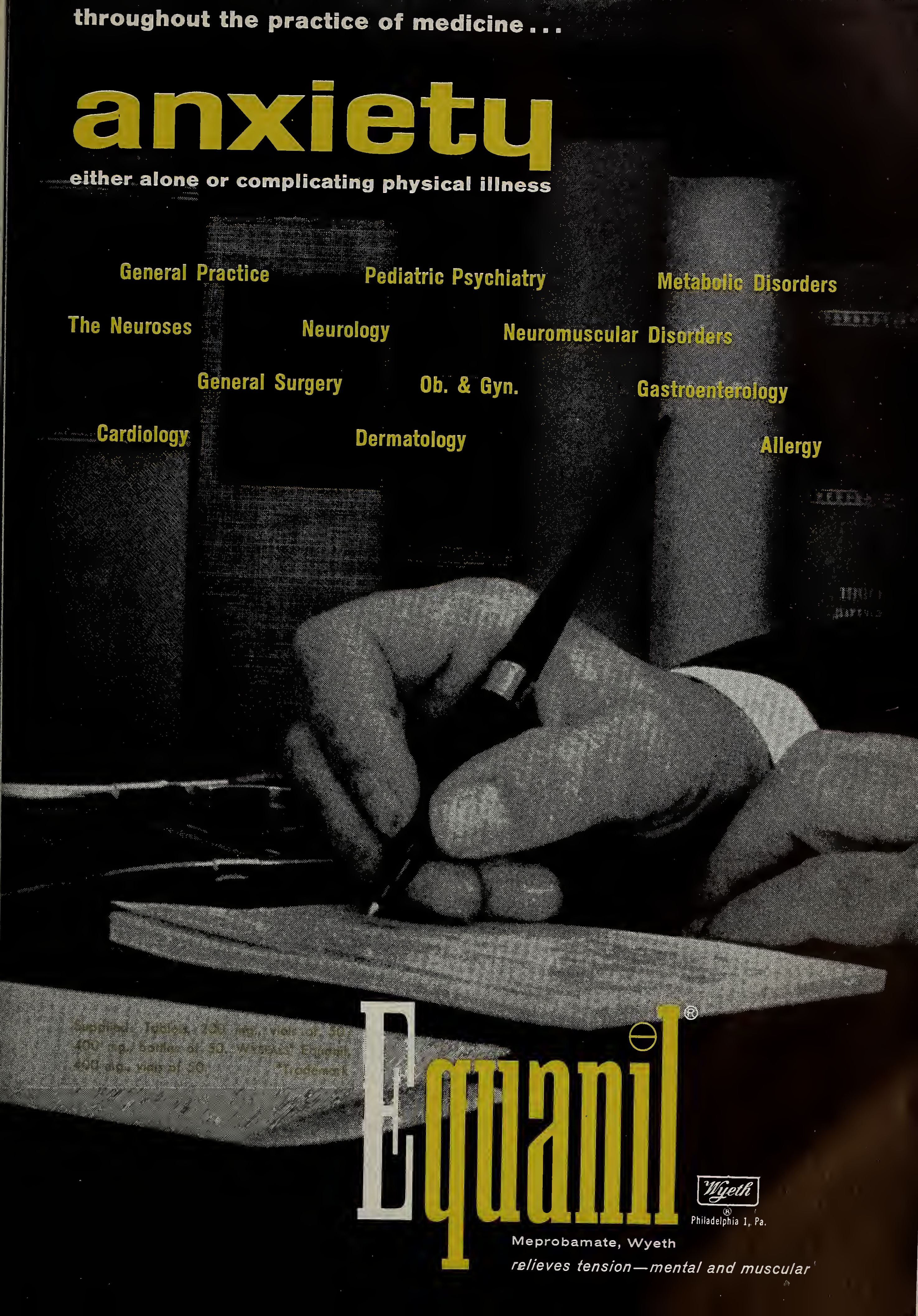

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Eisenhower Proud of His Success as a Father

(Continued from Page 50)

"During Dad's own Army career, he has encountered most of the problems I have," admits his son, "so he has often been helpful."

Even today, according to the author, John T. Harris, Westport, Conn., when John visits with his busy father, he still "chews the fat" with the President. "But I don't quiz Dad about his weighty affairs of state," says John. "He now likes to talk golf and relaxing things with me."

Nonpolio Viruses Found to Cause Paralysis

(Continued from Front Advertising Section, Page 45)

Because of the possibility of believing such illness to result from vaccine failure, paralytic or nonparalytic poliomyelitis-like disease must be carefully studied for its cause.

Dr. Hammon's associates in the study were David S. Yohn, Ph.D., Ernest H. Ludwig, Ph.D., Rose A. Pavia, B.S., Gladys E. Sather, M.P.H., and Lambert W. McCloskey, M.S.

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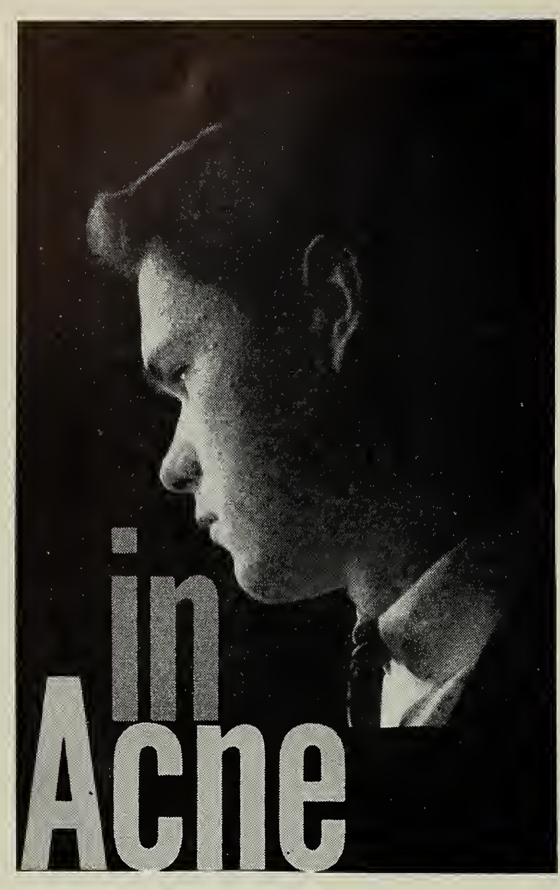

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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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Cooperative Efforts Urged in Treating Speech Disorders

Greater cooperation between family physicians and speech pathologists in treating speech disorders in children has been urged.

Writing in the June 14 issue of the *Journal of the American Medical Association,* Herold Lillywhite, Ph.D., Portland, Oregon, said such cooperation can ease an unreasonably heavy burden for the physician.

"Any modern doctor realizes that the day is past when he can be expected to supply all the answers to questions about any complaint from his patients." However, Dr. Lillywhite said, "many of the patients and patients' parents still expect this of him."

If physicians and speech pathologists will open the avenues of communication and cooperation between them it will be a step toward the sharing of at least one problem area—speech correction.

Because the family physician, or the pediatrician, is normally the first to be contacted by the parents of a child with a speech problem it is necessary that the physician know what constitutes a speech problem, what to do about it, or where to refer it.

Dr. Lillywhite, professor of speech pathology at the University of Oregon Medical School, has developed a *Doctor's Manual of Speech Disorders* intended to help the general practitioner understand when speech is deviating from the normal and the nature of the deviation.

In assessing prelanguage development, he said, "one needs to be aware of how the child vocalizes, what sounds he makes, how he begins to combine sounds, when and how he develops vocal variety (inflection), when he begins to imitate, and when and how he responds to spoken sound."

Between the ages of one and six, children usually follow a consistent pattern in their speech development. Dr. Lillywhite said some deviations may be expected at times, but unusual deviations may indicate trouble and the need for corrections.

Among the many deviations which indicate trouble are:

The child is not talking by the age of two.

Speech is largely unintelligible after age three.

Sounds are more than a year late in appearing according to the development sequence.

Many omissions of initial consonants after age three.

Substitution of easy sounds for difficult ones after age five.

No use of sentences by age three.

Word endings are consistently dropped after age five.

Child is embarrassed and disturbed by his speech at any age.

Whenever possible, Dr. Lillywhite recommends

(Continued on Page 62)

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Cooperative Efforts Urged in Treating Speech Disorders

(Continued from Page 58)

that the family physician examine the child personally. "It is risky to base an evaluation of the speech entirely upon what the parents say about it. They rarely are able to report accurately concerning this aspect of their child's behavior."

Should the examination indicate that a speech problem does exist, the physician can then make a referral to a qualified speech pathologist for a detailed evaluation of the speech and hearing.

By working together the physician and pathologist can exchange vital information which, coupled with the proper therapy, can correct the disorder.

The largest single disabling disease was the common cold, with diseases of the heart, and rheumatism and arthritis next in order.

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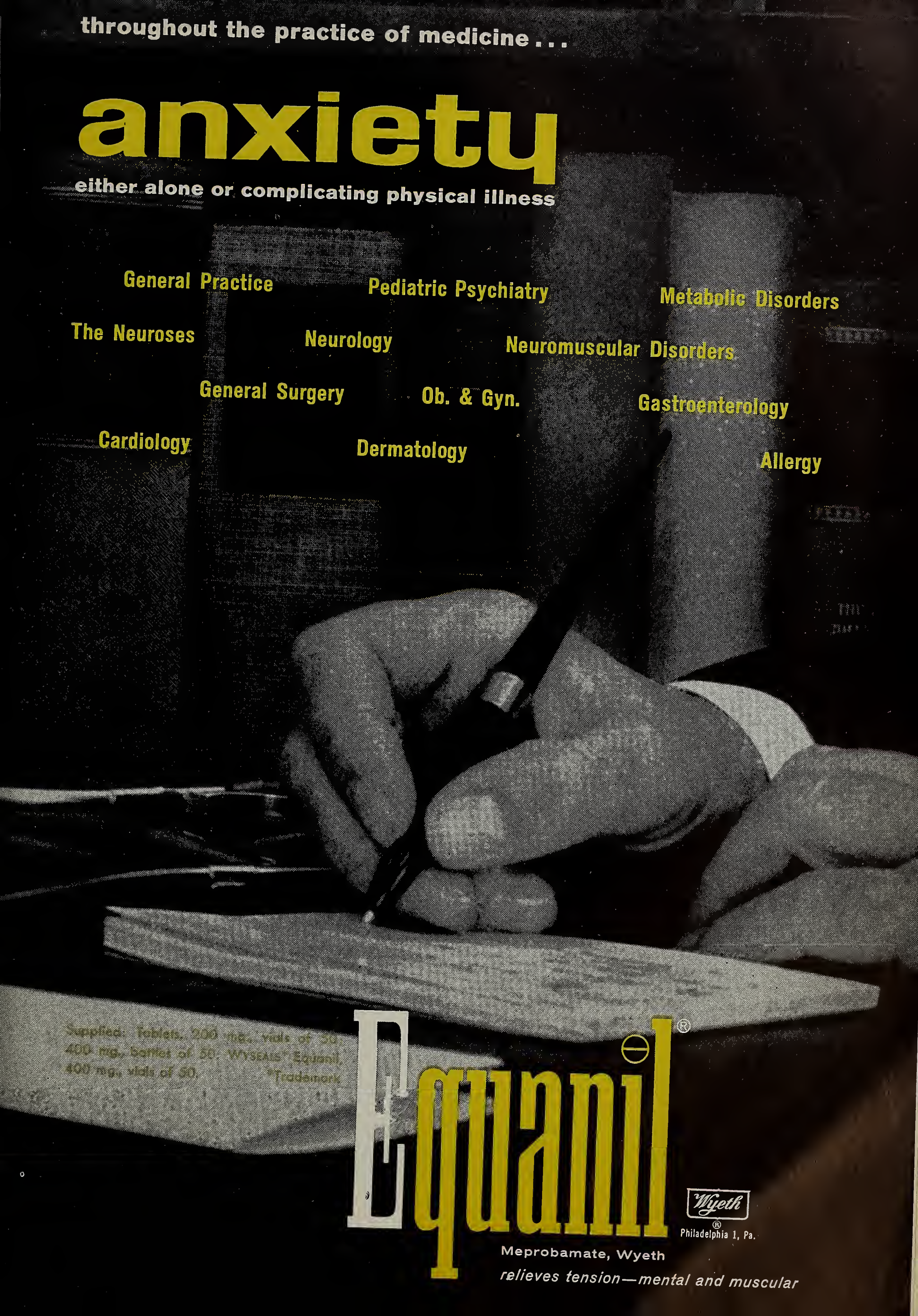

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Penicillin Allergy Can Be Curtailed in Polio Shots

A California physician has advised persons with a history of penicillin allergy to ask their physicians for penicillin-free vaccine when receiving polio shots.

Dr. Murray C. Zimmerman, Whittier, California, said there is sufficient penicillin in most polio vaccines "to cause allergic reactions in exceptional patients highly sensitive to penicillin."

These vaccines have penicillin concentrations ranging from 1 to 200 units per cubic centimeter. On the other hand, he said, penicillin-free vaccines have less than 0.001 units per cubic centimeter.

These observations appear in the August 9 issue of the *Journal of the American Medical Association.*

In the event penicillin-free vaccine is unavailable, Dr. Zimmerman suggests an injection of penicillinase (Neutrapen) before the polio vaccination is given. Penicillinase destroys penicillin but has no effect on any other constituent of poliomyelitis vaccine.

"Penicillinase eliminated all symptoms of allergic reaction in about 95 per cent of approximately 200 previously reported patients with penicillin allergy.

"Over 80 per cent of patients obtain clearing of the reaction with one injection," Dr. Zimmerman reported.

Surgery for Patent Ductus Arteriosus Needed in Very Early Life

Surgical correction of patent ductus arteriosus, a congenital heart defect, should be done before a child reaches the age of five, even if he shows no symptoms, two Ohio surgeons stated.

Writing in the May 24 issue of the *Journal of the American Medical Association*, Drs. H. William Clatworthy Jr. and Victor G. McDonald Jr., Columbus, said the "optimum age" for performing the operation has not been clearly defined, although it usually has been considered to be between six and 12, unless signs of heart failure appear. However, failure to correct the defect in early life may expose the child to the "needless threat" of retarded growth, heart and lung malfunction, and other serious complications.

Of 63 patients under the age of 16 years who were operated on at Columbus Children's Hospital during a seven-year period, nearly 50 per cent were younger than five years. Among the 63 patients there were no deaths or any serious postoperative complications.

In general the postoperative course was smoother in the younger children, even though the majority of them showed serious symptoms, were badly underweight, and often suffered from the heart's inability to maintain adequate circulation.

On the basis of the study, the physicians concluded that the operation should be performed on any child who shows symptoms as soon as the diagnosis is established and on children without symptoms before they reach the age of five years.

Failure to eradicate the defect may expose the infant with symptoms to progressive failure of the heart to maintain adequate circulation and the young child to the needless threat of cardiorespiratory disability, growth failure which may not be entirely reversible, and to such additional serious complications as endarteritis, degenerative disease of the major and minor pulmonary vessels, and irreversible pulmonary hypertension.

American Medical Association Adopts New Code for Physicians and Lawyers

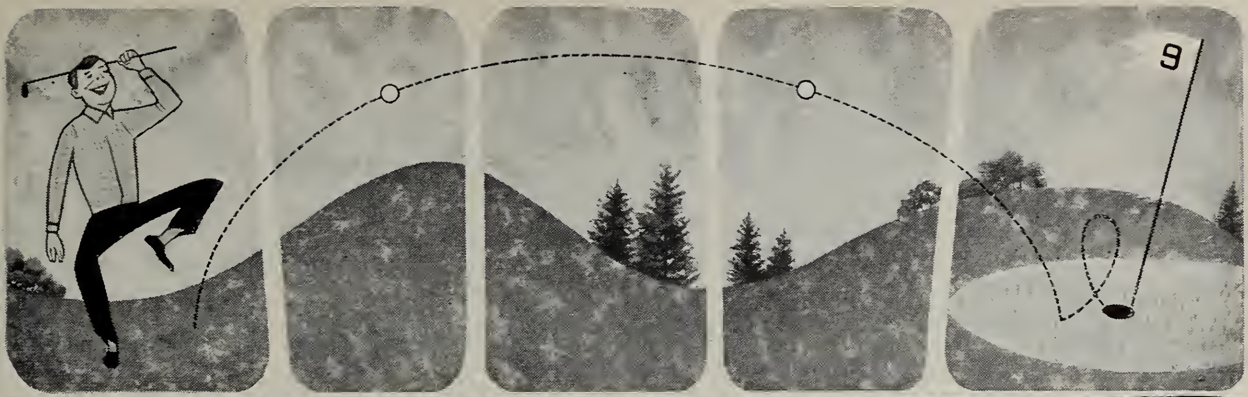
A new "National Interprofessional Code for Physicians and Attorneys" was approved by the House of Delegates at San Francisco. The code will serve as a suggested guide for physicians and attorneys in their inter-related practice.

The code was formulated by a joint national medicolegal liaison committee made up of representatives of the American Bar Association and the American Medical Association. The three A.M.A. representatives were Drs. David B. Allman, Hugh Hussey and George Fister. Besides drawing up this new code, the joint committee considered such things as the encouragement of state and local medicolegal meetings, medical professional liability problems, medicolegal forms and the possibility of establishing medicolegal courses in law schools and medical schools. The code was prepared in general terms to permit its adaptation in the light of local conditions.

The preamble of the code states that it "will serve its purpose if it promotes the public welfare, improves the practical working relationships of the two professions, and facilitates the administration of justice."

Various sections cover such topics as medical reports; conference between the physician and the attorney; subpoena for medical witness; arrangements for court appearances; physician called as witness; fees for services of physician relative to litigation; payment of medical fees; implementation of the code at state and local levels and consideration and disposition of complaints.

—*A.M.A. Secretary's Letter*



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Catholic Charities Assail Government Handouts

The National Conference of Catholic Charities made it clear that it wants no help from government in the field of hospital and medical group insurance.

Testifying recently before a House committee in Washington, which is considering changes in the Social Security Act, Msgr. John O'Grady, secretary, said that over-all government relief programs "represent the welfare state in its most complete form."

The monsignor added that "at this time, we are not sympathetic about having the federal government enter the field of hospital and medical group insurance. We believe that it brings the federal government too close to the problems of family life. It is an entire departure from the objectives of a social insurance program."

Monsignor O'Grady added that the studies of the aging made by Catholic charities "do not justify our supporting a program for the entrance of government into the field of hospital and medical group insurance."

—*A.M.A. Secretary's Letter*

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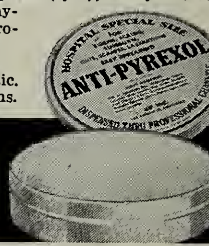

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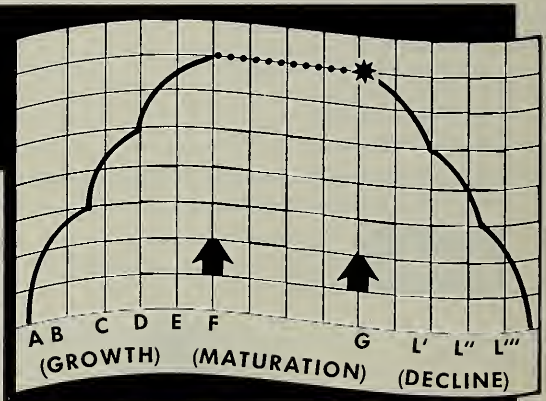

For patients over 40, The G POINT (point of declination in life) can be postponed!

Properly balanced Androgen — Estrogen — nutritional therapy may prevent premature aging and damage of gonadal decline and nutritional inadequacy.

Complaints of symptoms such as muscular pain, fatigue, irritability, and poor appetite in the patient over 40 may be the first indications of three major stress factors in the aging process: (1) Gonadal Hormonal Imbalance, (2) Nutritional Inadequacy and (3) Emotional Instability. GERITAG is especially formulated to guard against premature damage and to delay the degenerative process.

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*Chappel, C.C., J.A.M.A., 162: 1414, (Dec. 8) 1956

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B-12	1 mcg.	Magnesium	5 mg.
Molybdenum	0.5 mg.	Iadine	0.15 mg.
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Characteristics: New Cortrophin-Zinc provides corticotropin of unsurpassed purity with low foreign protein content. This reduces the risk of sensitization reactions.

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Because Cortrophin-Zinc is virtually painless on injection and its prolonged action obviates frequent injections, it is now practicable to use Cortrophin-Zinc in most of the indications where formerly reliance has been on corticosteroids. This freedom from apprehension of deleterious depressive effects permits clinical use of valuable hormone therapy on a broader scale than has been possible heretofore.

Clinical Uses and Dosage: The many published reports on the use of Cortrophin-Zinc as well as ACTH, in thousands of patients indicate its value in over 100 disorders. Most responsive have been: allergies and hypersensitivities, rheumatoid arthritis, bronchial asthma, serum sickness and inflammatory skin and eye diseases.

Dosage should be individualized, but generally initial control of symptoms is obtained with a single injection of 40 units of Cortrophin-Zinc daily, until control is evident. Maintenance dosage is generally 20 units (or less) twice a week.

Use of Cortrophin-Zinc with oral steroids is now recommended as a safety measure to supply the important suprarenal stimulation and lessen the hazard of atrophy. Periodic use of Cortrophin-Zinc is advocated with all steroid analogs, such as cortisone, hydrocortisone, prednisone, prednisolone, methylprednisone, and triamcinolone.*

Supply: 5-cc vials containing 40 and 20 U.S.P. units of corticotropin per cc; 1-cc ampuls containing 40 and 20 U.S.P. units of corticotropin, with sterile disposable syringes.

*Write for complete literature and bibliography containing specific dosage schedules to:

Medical Department

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Air Conditioning is Healthy

Air conditioning—custom tailored climate—means much more than mere cooling.

Properly used, air conditioning implies year-round modification of humidity, air currents, and dust content of air as well as combating cold or heat, stated an article in the July issue of *Today's Health*, a publication of the American Medical Association.

According to the author, J. C. Furnas, Lebanon, New Jersey, air conditioning "rescues hay fever sufferers from airborne pollen and keeps heart patients at recommended even, moderate temperatures."

It can, he said, "be distinctly 'good for' the healthiest . . . because it takes much of the curse off the bullying heat and smothering humidity of our temper-gnawing, energy-sapping summers."

In order to derive the full benefits from air conditioners, people must learn to keep windows and doors shut. The air conditioner is designed on the assumption that it alone will be processing your indoor climate. "It needs no amateur help," the author stated.

Most people agree that air conditioning is helpful, but ideas of temperature comfort can also vary among individuals. "Humidity itself rules out any

(Continued on Page 30)

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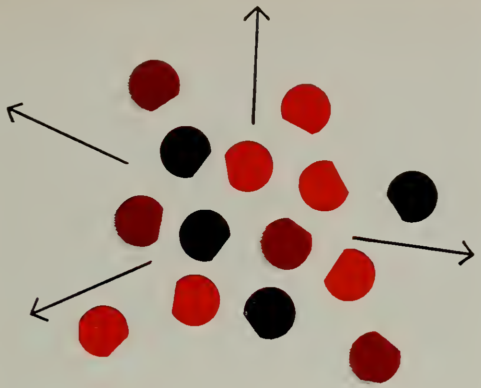
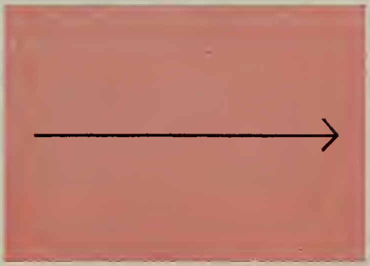


not erratic

or sporadic



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Air Conditioning is Healthy

(Continued from Page 24)

possibility of settling on an 'ideal temperature' for human beings."

A housewife who feels all right at 75 degrees with 50 per cent humidity will swelter if it goes to 80 per cent. Drop the humidity to 20 per cent and she will be chilled. This is a sound reason for keeping the doors and windows shut. "Letting in untreated outside air destroys the humidity-temperature balance on which comfort depends."

Considerable debate still exists over the proper setting of the thermostat. In warmer parts of the country air-conditioned families often go for the fixed-level theory, ignoring outdoor conditions.

The author recommends, however, a 15 degree spread between the inside and outside temperature. "Thanks to the humidity angle," he said, "this 15 degree spread gets practically all the potential comfort out of home air conditioning."

With an efficient air conditioner keeping interior humidity at the proper 40-50 per cent level, even 80 degree temperature indoors to match 95 degrees outdoors will not be at all oppressive.

" 'It's not the heat; it's the humidity' may be trite," he said, "but it's the backbone of sound air conditioning."

"The Unsugared Pill"

A recent Sunday edition of the Omaha, Nebraska, *World-Herald* carried a down-to-earth, editorial analysis of the British Health scheme, which celebrated its 10th anniversary in July.

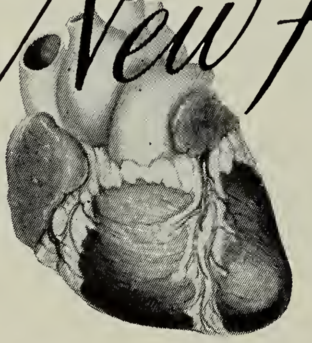
The editorial was based on an article in the *London Economist.* Both papers agreed that the British plan after 10 years is a failure.

The *Economist* reports that today little is heard of the rosy promises of the socializers 10 years ago. The British, the paper said, have learned that government cannot reduce sickness simply by providing a so-called free treatment. And the people have learned that as taxpayers they are spending a lot more for medical treatment than they did as paying patients.

"The *Economist's* report is particularly enlightening," said the Omaha *World-Herald,* "because there has been so much propaganda in America recently about the magnificent, overwhelming success of Britain's 'free' medicine. The facts indicate that it's not very good and that its problems are growing.

"The British experience is a pretty good argument for keeping the private medical system which we Americans now have."

—A.M.A. Secretary's Letter



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Fear of the next attack is replaced by pulse-slowing, pleasantly tranquilizing effects which lessen severity and frequency of anginal attacks.

DOSAGE: One to two tablets q.i.d., before meals and on retiring.

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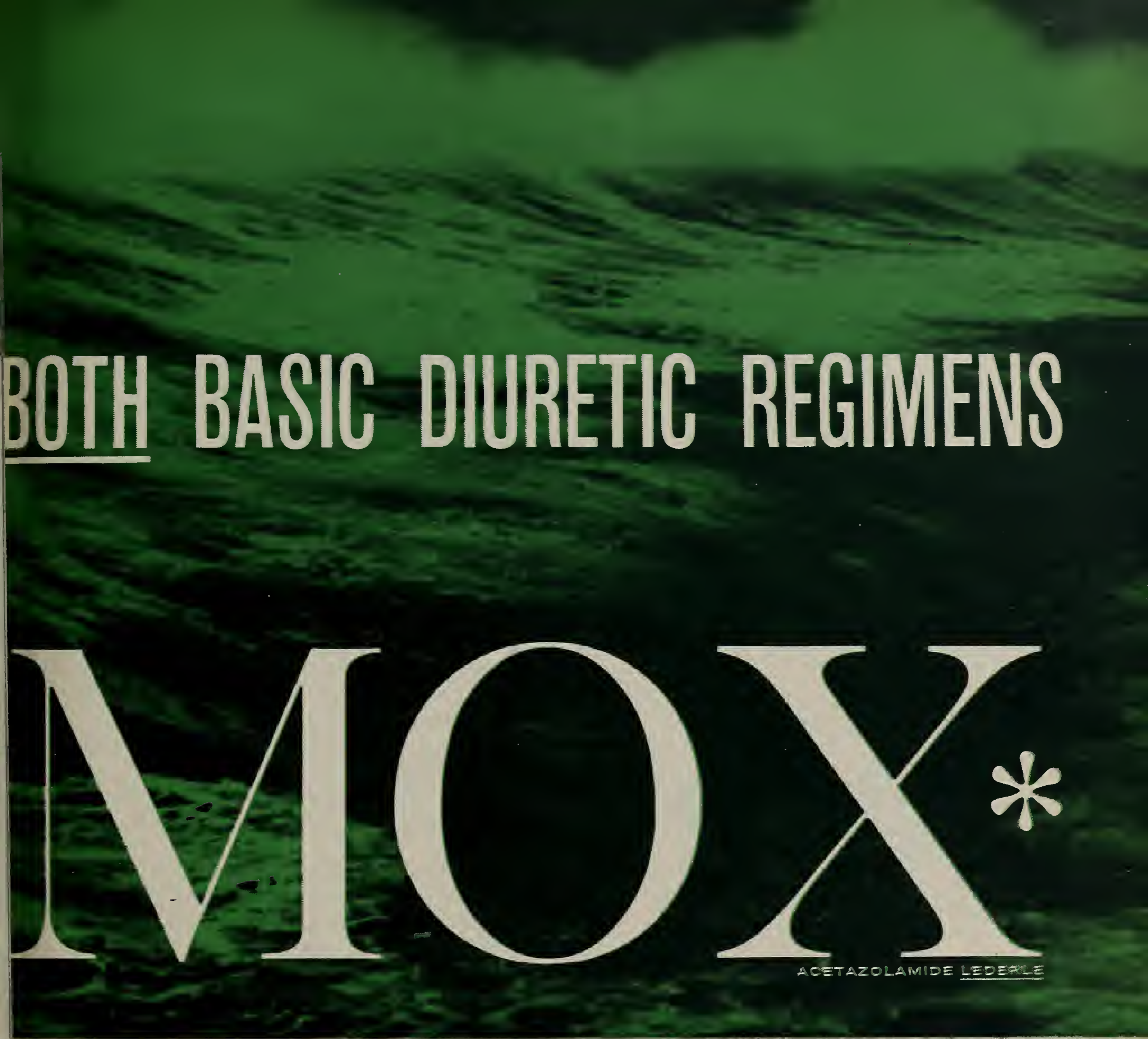

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Advantages of DIAMOX in single-drug diuresis

DIAMOX—operating through the well-understood mechanism of *bicarbonate* transport regulation—provides ample, prolonged diuresis in the great majority of patients.

DIAMOX is virtually non toxic . . . has not caused renal or gastric irritation . . . has no pronounced effect on blood pressure. It is rapidly excreted, does not accumulate in the body, permits convenient dosage adjustment, allows unbroken sleep. Small, tasteless, easy-to-take tablets . . . usual dosage, only one a day.

CARDIAC EDEMA

PREMENSTRUAL TENSION

EDEMA OF PREGNANCY

OBESITY

2

Advantages of DIAMOX in intensive, two-drug diuresis

When intensive diuresis must be maintained, DIAMOX, alternated with an agent for regulation of *chloride* transport, has proved a regimen of choice. Through dual *bicarbonate-chloride* regulation, it produces maximal sodium-water excretion with minimal distortion of serum electrolyte patterns, greater patient comfort, lessened risk of induced drug resistance.

ADVANCED CONGESTIVE HEART FAILURE

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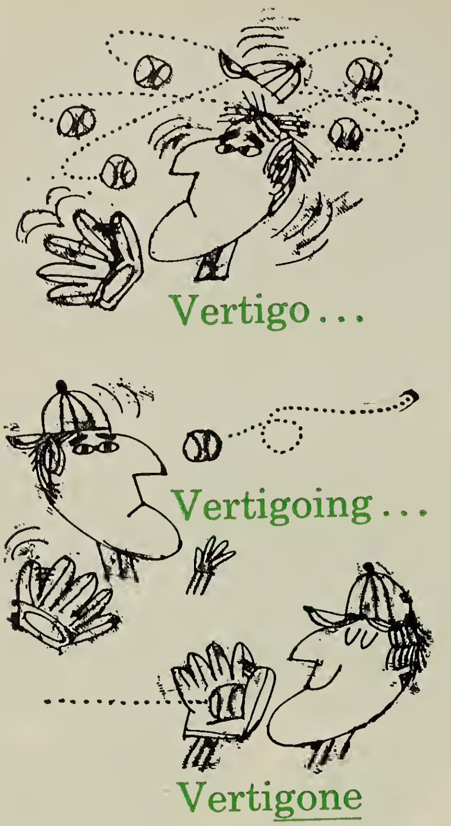

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Executives Show Less Vascular Disease Than Nonexecutives

Being an executive doesn't necessarily mean that you have high blood pressure or hardening of the arteries.

In fact, a recent five-year study of more than 2,000 individuals showed that executives had less hypertension and arteriosclerosis than did nonexecutive office workers of comparable sex, age, and work environment.

The study, reported in the June 19 issue of the *Journal of the American Medical Association,* was made by Dr. Richard E. Lee, New York Hospital-Cornell University Medical College, and Dr. Ralph E. Schneider, New York University College of Medicine.

The authors defined an executive as a person dealing with policy formation and implementation. The 1,171 male executives studied ranged from "top executives" (board directors, corporate officers, and general managers) to "minor executives" (division heads, auditors, and others of lesser rank than department heads).

Also studied were 1,203 nonexecutives, of whom 563 were women. They included stenographers, secretaries, clerks, assistant supervisors, and supervisors.

Of the executives, 12.3 per cent had some type of high blood pressure, as did 15 per cent of the male nonexecutives over 40 years of age. Arteriosclerosis of some type was found in 7.8 per cent of the executives and 15.4 per cent of the nonexecutives.

No significant relationship was found between the incidence of heart attacks and the level of business responsibility. Heart attacks occurred in 3.7 per cent of executives and 5.1 per cent of the nonexecutive males over 40.

Among the reasons suggested by the physicians for the less than expected rate of executive vascular disease is that these men have learned the value of "escape valves" and the need for outside avenues of expression, such as hobbies.

"The lack of an increased incidence of hypertension among executives as a 'stress' phenomenon further emphasizes the importance of reaction by the individual to his environment rather than the physical and intellectual demands of that environment per se."

"Stress is a relative and a subjective matter. When the inherent capacities of the individual to perform fail to measure up to the demands of his world, the harmonious balance between the subject and his environment is disrupted and a stress reaction takes place." This occurs, they added, "regardless of whether the factor in the external environment is a speedily approaching deadline for a frantic technical assistant or the threatened failure of a large business venture for the director in charge."

(Continued on page 40)

for example...

IN CARDIAC CONDITIONS

ATARAX *is anti-arrhythmic.* In addition to producing tranquilization, ATARAX "restored and then maintained normal sinus rhythm" in 30 patients with cardiac arrhythmias. Most had been refractory to standard measures.[1]

IN ALLERGIC REACTIONS

ATARAX *is antihistaminic, antiserotonin.* Tranquilizers usually have an equivocal effect on allergic disease; ATARAX appears to be the exception.[2] Feinberg reports "striking results" in 15 out of 17 patients with chronic urticaria that cannot be attributed to calming action alone.[2] To date, over 649 cases of allergic dermatoses have responded favorably to ATARAX.[3,4]

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SUPPLIED: Prescription only. *Tablets,* 10 mg., 25 mg., and 100 mg., bottles of 100. *Syrup,* pint bottles. *Parenteral Solution,* 10 cc. multiple-dose vials.

1. Burrell, Z. L., et al.: Am. J. Cardiol. *1*:624 (May) 1958. 2. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 3. Eisenberg, B. D.: Clin. Med. *5*:897 (July) 1958. 4. Robinson, H. M., Jr., et al.: South. M. J. *50*:1285 (Oct.) 1957. 5. Strub, I. H.: Personal communication. 6. Schuller, B.: Gaz. des Hôpitaux No. *10*:391 (Apr. 10) 1957.

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E. Vincent Askey Honored

Dr. E. Vincent Askey, Los Angeles, speaker of the A.M.A. House of Delegates, was honored recently at the 143rd commencement of Allegheny College in Meadville, Pennsylvania. He was given an honorary degree of doctor of science.

An accompanying citation praised Dr. Askey's long service in behalf of American medicine and also commended his civic work. Despite a busy practice, the citation said, Dr. Askey has found time to serve as "a member and president of the Los Angeles City Board of Education; combining high ideals, responsible citizenship, and distinguished professional achievements."

—*A.M.A. Secretary's Letter*

Executives Show Less Vascular Disease Than Nonexecutives

(Continued from Page 36)

In conclusion, the authors wondered if "at least a part of the recent emphasis on dangers of executive life to the vascular system may be based more on knowledge of the exceptions rather than of the rule."

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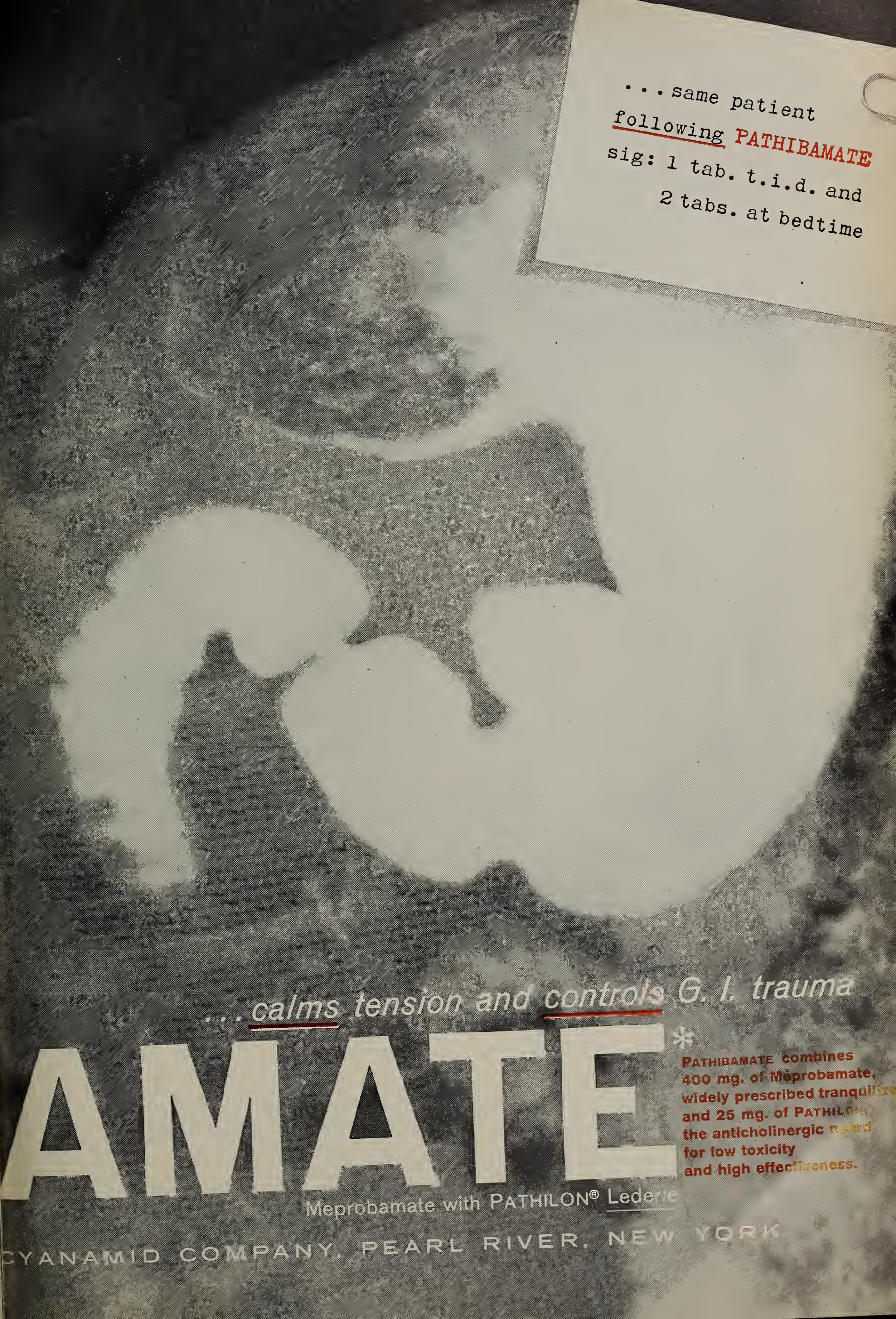

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the anticholinergic noted
for low toxicity
and high effectiveness.

Teen-Agers Shying Away From Socialized Medicine

The Purdue Opinion Panel of Purdue University surveyed thousands of representatives of high school students in every part of the nation to learn what they really know about sound medical principles for keeping fit. The results of that survey were carried in the press recently, and there was one portion of interest to physicians.

The survey report said that families of 70 per cent of today's teens carry health insurance, and it then pointed out that the tremendous growth of private medical insurance programs is credited with turning teen-agers increasingly away from socialized medicine. In the poll on the subject, 52 per cent of young people thought the government should establish a permanent system of providing medical services for all, with 22 per cent opposed and 26 per cent undecided.

But the significant point was that these figures represent a change from opinions expressed in 1948, when 80 per cent of teen-agers approved of socialized medicine, 11 per cent disapproved and 9 per cent were undecided.

—A.M.A. Secretary's Letter

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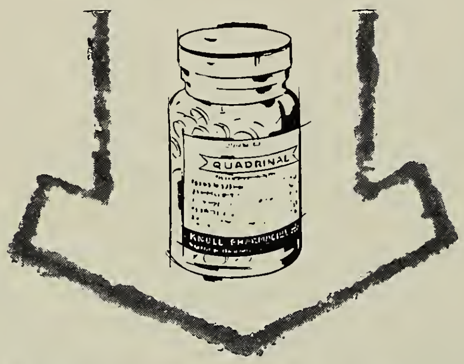

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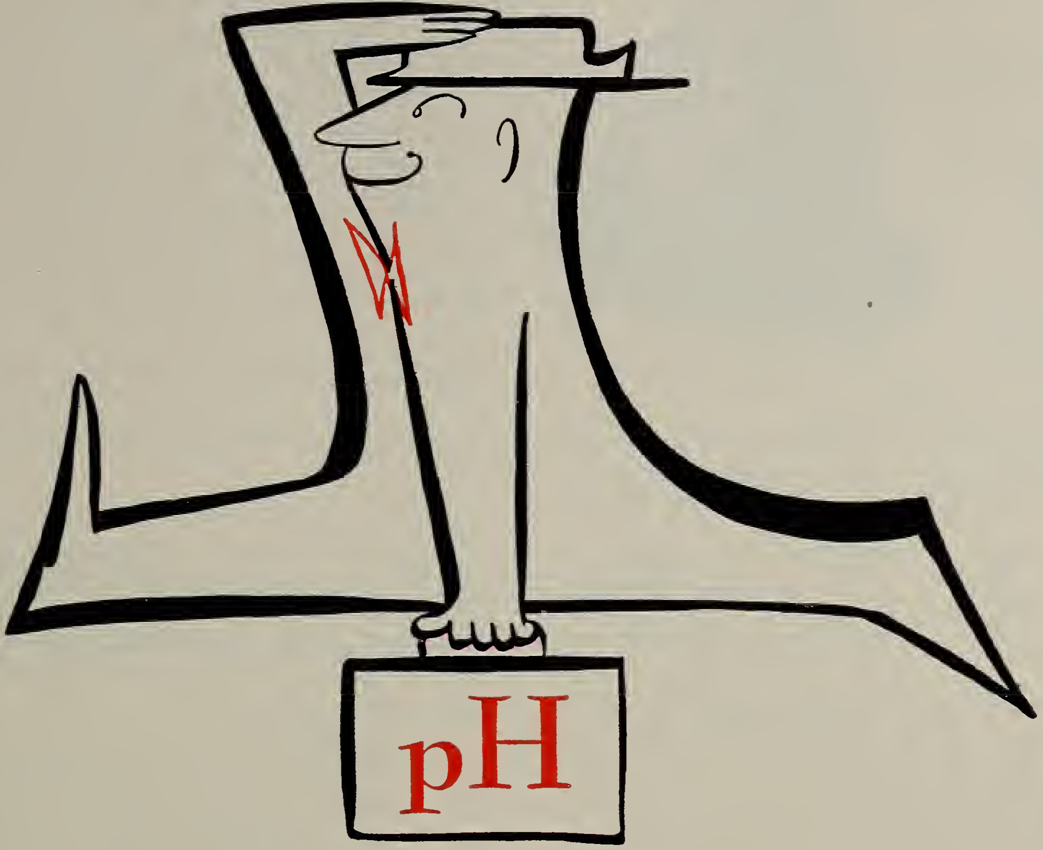

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American Medical Association to Alert Public Against Food Fads

The American Medical Association recently announced plans for a concerted program to alert the public to the dangers of substituting "food fads" for sound nutrition.

Dr. F. J. L. Blasingame, executive vice-president of the American Medical Association, pointed out that millions of Americans are influenced by nutritional products of questionable merit.

"We feel it is our duty to warn against abandoning the traditional 'three square meals a day' and the principles of sound nutrition for the pills and schemes of food faddists," he said.

The United States Food and Drug Administration and the National Better Business Bureau are cooperating with the American Medical Association in this program.

Food and Drug Commissioner George P. Larrick, Washington, D. C., in commenting on the problem said, "Our food supply is unsurpassed in volume, variety, and nutritional value; our medical care is unexcelled. Yet food faddists and some promoters circulate false ideas about food and nutrition which can be dangerous to health."

The American Medical Association's educational program will be conducted via television, motion pictures, public meetings, newspapers, and magazines. One is a 28-minute motion picture produced in Hollywood for use on television and for showings to club, church, and school groups. Titled "The Medicine Man," the 16-mm. black-and-white film exposes two types of nutritional "quacks"—the health food lecturer and the door-to-door food supplement salesman who makes unwarranted claims for his product.

A second aid in the campaign is a 20-foot exhibit designed for display at state and county fairs under the auspices of local medical societies. In addition to telling the facts about food supplements and health food lecturers, it will also expose weight reduction schemes and other nutritional "flim-flams."

To underscore the need for an educational campaign against food faddism, Dr. Charles S. Davidson, Boston, Massachusetts, chairman of the American Medical Association's Council on Foods and Nutrition, said:

"Some Americans not only waste their money on food fads, but in many cases actually endanger their health. Federal agents have uncovered peddlers who claim their nutritional products will cure almost any disease.

"The greatest danger comes when sick people abandon accepted therapy to experiment with food fads or when they attempt to treat serious symptoms with nutritional products of unknown reliability instead of going to their family doctors for a checkup."

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The Relationship of Dietary Fat to Atherosclerotic Disease

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• Atherosclerosis is the Number One public health problem. Many factors have been implicated in the pathogenesis of this disease. Prominent among these factors is the amount and kind of fat in the diet. The evidence now appears to be conclusive that sufficient quantities of polyunsaturated fat in the diet, with proportional decrease in saturated fat, will result in major decrease in blood lipid. Some evidence indicates that such blood lipid lowering produces a desirable effect upon existing atherosclerosis. Much additional time and work will be required to clarify the prophylactic and therapeutic value of this type of dietary approach.

No more controversial medical question exists than that of the relationship of diet to atherosclerosis in general, and to coronary atherosclerosis in particular. The following points of view exist:

1. In humans, diet bears *no* relationship to coronary atherosclerosis.

2. Dietary factors are the *only* factors of any importance in the etiology of coronary atherosclerosis in humans.

3. Dietary factors, in conjunction with hereditary factors and other environmental entities play an important role in the etiology of human atherosclerosis.

4. Fats are fats and all of them are bad, and therefore, insofar as possible, should be eliminated from the diet if one wishes to keep his coronary arteries in good condition.

5. There are major differences in dietary fats, with respect to the pathogenesis of coronary atherosclerosis: Specifically, saturated fats are on the wrong side of the ledger, and the polyunsaturated fats are on the right side of the ledger. (Of the investigators who subscribe to this concept, there are those who particularly emphasize the inclusion of the polyunsaturated fats, and those who particularly emphasize the elimination of saturated fats.)

6. A variety of other dietary factors have been included in a plus-or-minus classification.

7. With almost no exception, there is agreement that a diet which results in obesity very significantly increases the tendency to coronary heart disease. This is perhaps the *only* area in which full agreement exists.

One of the major factors that has retarded resolution of the divergent points of view noted above is the existence of pronounced species differences. The same diet administered to a rat and to a mouse can produce very different blood lipid levels and dif-

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Part of a Panel Discussion on the California Epidemiological Studies of Coronary Heart Disease presented before the Section on Public Health at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

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ferent patterns of deposition of lipid in various locations. Even greater differences exist between rabbits and rats. Who is to say which of these species will yield information which is applicable to humans?

If, then, the problem fundamentally is one which has to be solved by human investigation, how does one go about obtaining such a solution? Obviously, it is impossible to obtain serial biopsy of specimens of blood vessels in a human subject. Almost the same statement applies to the setting up of a highly acceptable controlled study in which perhaps 1,000 subjects would be given a diet which is regarded as being highly undesirable, and another 1,000 subjects a diet which is regarded as having high "anti-coronary" value. Probably the closest approach to such a study is to follow one group which by choice consumes a diet that the investigator regards as being somewhat undesirable, and a second group composed of "motivated persons" who by one means or another can be persuaded to follow a diet which he regards as being in a favorable category. This will receive further consideration (see below).

If one accepts the concept that *the* definitive study is yet to be done, the obvious question arises: How well grounded are any of the preceding conclusions in this field? The answer appears to be: They are grounded upon divergent animal observations which may bear no relationship whatever to the human problem, and/or upon human observations, all of which are more or less fallible.

All human studies which have any possible meaning rest upon one basic assumption, namely, that in humans the level of certain blood lipids bears a definite relationship to blood vessel disease. There is now general acceptance of the statement that of the various blood lipid entities which have been studied, the plasma cholesterol is at least as meaningful as any of the lipo-proteins that are more difficult to measure, possibly more meaningful. On the basis of many studies there appears to be no question that the plasma cholesterol tends to increase with the age of the subject and that the plasma cholesterol level, statistically, is higher in groups with known atherosclerosis than in groups of persons with no detectable atherosclerosis. Unfortunately, there are so many individual exceptions to these statements that the cholesterol level as a dependable index in a given individual leaves much to be desired.

Admitting all the above shortcomings, the point of view of most careful workers in the field at present is that, other things being equal, if by dietary or other means one is able to achieve a low level of plasma cholesterol, this is desirable as compared with a relatively or absolutely high level of plasma cholesterol. Accepting this point of view for the present, are there dietary measures which predictably will produce and maintain a relatively or absolutely normal level of blood cholesterol. If so, what is the upper limit of normal?

Taking the last question first, if one uses the Sperry-Schoenheimer method, or one of its modifications, for determination of plasma cholesterol, it is the opinion of the authors that any cholesterol level above 220 mg. per cubic centimeter is to be regarded as undesirable, and, if possible, a level of less than 180 mg. is to be achieved. This statement is based upon multiple observations in young normal adults and in older persons with no evidence of vascular disease. Can this be brought about by any reasonable means? The answer appears to be in the affirmative. The principles involved appear to be as follows:

1. Avoidance of obesity, and the use of appropriate weight reduction procedures if obesity exists.

2. The inclusion in the diet of adequate amounts of polyunsaturated fats.

3. The avoidance of excessive amounts of saturated fats in the diet.

4. The use of a diet which is nutritionally sound in other respects, with reference to adequate quality and quantity of protein and inclusion of essential vitamins and minerals.

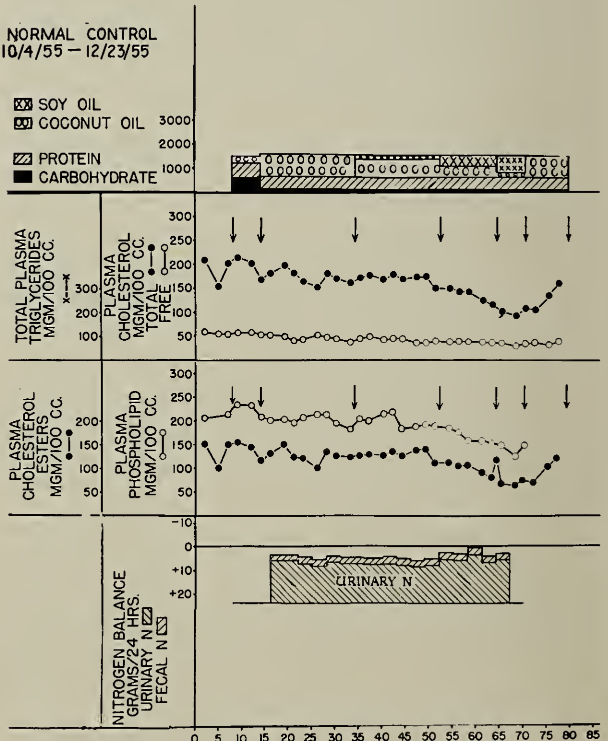

Chart 1.—Plasma cholesterol decreased when 50 per cent of the predominantly saturated fat was replaced by an equal quantity of predominantly polyunsaturated fat.

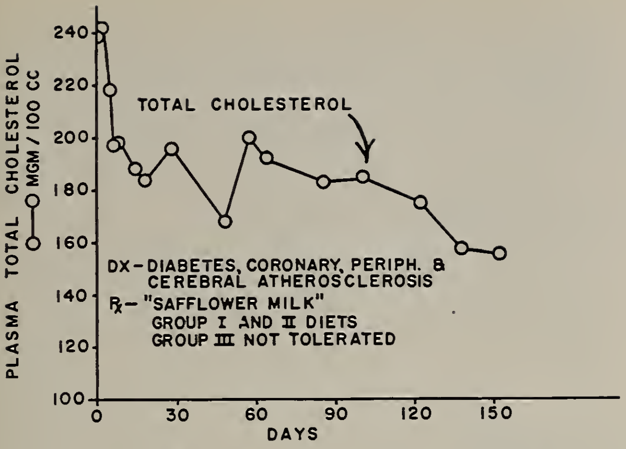

Chart 2.—Effects of a mixed diet containing large amounts of polyunsaturated fat in an elderly male diabetic with extensive vascular disease. Inclusion of fish and fowl is tolerated (Group II diet). Inclusion of meat and eggs in moderate amounts (Group III diet) resulted in prompt elevation of serum lipids. Safflower milk is "Saflac," made by Carnation Co.—a preparation in which butter fat has been replaced by safflower oil (75 per cent linoleic acid). Group I, II and III diets are described elsewhere.[2]

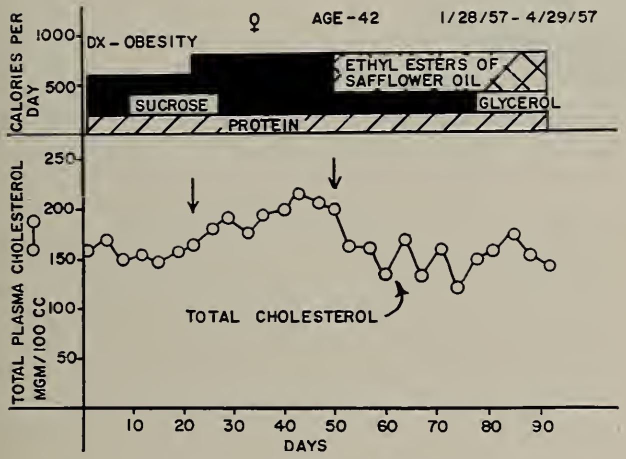

Chart 3.—Substitution of polyunsaturated fat for carbohydrate produces a fall in plasma cholesterol.

5. Adherence to a common-sense program, which includes adequate exercise, avoidance of excessive anxiety, avoidance of excessive use of tobacco and alcohol and avoidance of excessive fatigue. These nondietary factors will not be commented upon further, since this paper is concerned with diet.

What constitutes an adequate amount of polyunsaturated fat and an excessive amount of saturated fat? A single one-sentence answer to this pair of questions is not possible. In a middle-aged person with no evidence of atherosclerotic involvement, a ratio of 50 per cent predominantly unsaturated fat and 50 per cent predominantly saturated fat appears to be compatible with normal levels of plasma cholesterol (see Chart 1). In young normal persons the amount of polyunsaturated fat in relation to saturated fat may be very much less than this. In such persons, ten to twenty grams daily of linoleic acid may be sufficient to "balance" a relatively large quantity of saturated fats.[1]

In a person with clinically obvious atherosclerosis, it may be necessary to completely eliminate saturated fat from the diet for several months and to include in the diet very large quantities of polyunsaturated fats. When the desired level of blood cholesterol has been achieved and maintained for a period of perhaps two months, the diet may then be liberalized. Observations in a patient in which this was done are shown in Chart 2. Descriptions of "therapeutic and prophylactic essential fatty acid diets" are published elsewhere.[2] In the construction of diets it is to be kept in mind that the use of excessive amounts of concentrated carbohydrate may produce significant elevation of cholesterol as compared with a diet in which polyunsaturated fat is substituted for a portion of this carbohydrate (Chart 3).

What about acceptability of such diets? The answer to this appears to be that any diet which calls for a significant change in one's eating habits is, psychologically speaking, for a time relatively unacceptable. The dietary problem in the case of patients with resistant hypercholesterolemia appears to be essentially of the same type that one faces in dealing with a diabetic patient. Proper education and cooperation are the only answers. The problem is not one that can be solved by instructing a patient to add a tablespoon or two of unsaturated fat daily to his present diet.

What is the evidence that a diet which will achieve normal cholesterolemia will exert either a protective or a therapeutic effect insofar as the atherosclerotic process is concerned in man?

Here the answers are much less absolute than in the case of the blood lipids. In terms of our own experience, it is only possible to say that in a relatively small group of patients with partially occlusive peripheral atherosclerosis, either arrest of progression or actual improvement, as evidenced by functional capacity, has been observed. Several years must elapse before meaningful conclusions can be drawn.

Coincidental with this, work is under way designed to carry out a statistically adequate study of a group of men between the ages of 45 and 55 who do not have clinically obvious atherosclerosis at the time of admission to the study. These persons will be divided into four groups with respect to diet.

Group A will consume a low fat diet.

Group B will consume a low fat diet supplemented with relatively small amounts of unsaturated fat.

Group C will consume a relatively high fat diet with a preponderance of animal fat—essentially an average American diet.

Group D will consume a relatively high fat diet with preponderance of unsaturated fat.

Determination of blood lipids will be done periodically throughout a ten-year year. Repeated clinical evaluation will detect the occurrence of coronary heart disease or other manifestations of atherosclerosis. It is believed that this study will supply some of the answers that are so vitally needed.

Institute for Metabolic Research, 2701 Fourteenth Avenue, Oakland 6.

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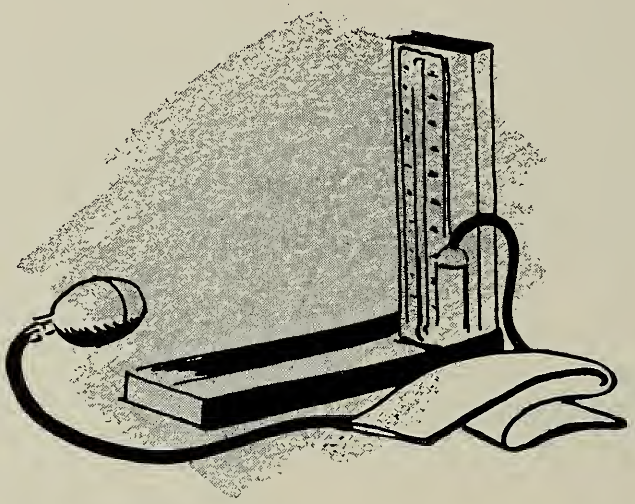

The Possible Relationship of Occupational Stress To Clinical Coronary Heart Disease

RAY H. ROSENMAN, *M.D.,* and MEYER FRIEDMAN, *M.D.,* San Francisco

• Perhaps because of difficulties inherent in quantitation and evaluation, the possible influence of differences in personality factors and of socio-economic stresses has largely been ignored in epidemiological studies of coronary artery disease. This relationship is explored and it is shown that the major factors contributing to the development of coronary disease, including intimal damage, elevated plasma lipid content, altered hemodynamics and accelerated blood clotting, are each affected by certain types of such stresses. On the basis of the considerable clinical and experimental evidence cited, it is suggested that the increasing occupational stress unique to industrialized society plays a dominant role in the high incidence of clinical coronary heart disease.

IN THE PAST DECADE more and more attention has been given to the role of dietary lipids in the pathogenesis of coronary heart disease. On the other hand, there is an increasing recent body of evidence[16-19,34,35,40,41,59,60] negating both the solitary and the supreme role of dietary fats in the pathogensis of clinical coronary disease. Even in countries with habitual high fat intake only one out of four or five men with a comparable environment develops *clinical* coronary disease.

Habitual lack of physical exercise also has been proposed as an important causal factor, a belief ostensibly supported by the findings of Morris and associates[29] that in the conductors of double deck buses in London, who get exercise, there is a lower incidence of clinical coronary disease than among the bus drivers who are sedentary. However, the validity of their conclusions is open to some question when their data are critically examined. This was done when it was learned that both the driver and the conductor of the downtown London buses are constantly exposed to a severe form of occupational stress that is largely absent in the suburban bus personnel. When their data were recalculated (as was done in Table 1) it was noted that the total incidence of clinical coronary disease was indeed greater in the bus drivers than in the conductors. However, it was also noted that the incidence of angina and infarction and the total incidence of clinical disease were each greater in the downtown bus drivers than in suburban drivers and were similarly greater in the downtown conductors than in the suburban conductors. Indeed, there was a higher total incidence of coronary disease in downtown conductors than in suburban drivers. Hence it would appear that the differences observed by Morris and associates cannot be accounted for simply on the basis of differences in occupational exercise patterns.

A second factor of possible fundamental importance in the causation of clinical coronary heart disease is that of occupational stress. Western man has been progressively immersed in a chronically stressful environment that is increasingly characterized, among many attributes, by mechanized speed and competitive haste, ambitious striving, multiple daily work deadlines imparting a constant sense of temporal urgency, by the inadequacy of frequently deceptive goals and by increasing economic debt and frustration, leading to extreme and long continued physical and mental effort. It seems almost incredible that some observers have confused these general forms of socio-economic stress, unique to Western societies, with superficial anxiety, fear, worry or other neurotic or even psychotic states, and that as a result some investigators have rejected occupational stress as a possible pathogenetic factor in clinical coronary disease. To support this rejection they point out that the incidence of this kind of stress just as prevalent in psychotics, in primitive races with "tabus and terrifying witchcraft," in suicide-prone groups[48] and in starving coolies[3,25]—groups in which the incidence of coronary artery disease is low. They also cite that a temporary reduction in mortality rate from coronary disease is found in war-besieged nations.[25,48] Stewart[49] succintly differentiated the unique socio-economic stress of Western man from the stress of flood, famine and pestilence by pointing out that the latter are emotionally accepted since they are outside the individual's control and since in all forms of *group* emotional stress, such as war, the *individual's* stress is either submerged or lost.

The proposal that the occupational and other socio-economic stress of certain classes of Western man may be a major factor in his relatively high

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Part of a Panel Discussion on the California Epidemiological Studies of Coronary Heart Disease presented before the Section on Public Health at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

TABLE 1.—*Analysis of Data of Morris and Co-Workers[29] on Incidence of Clinical Coronary Disease in Drivers and in Conductors of London Buses*

Location of Transport Personnel	Type of Transport Personnel	Incidence of Coronary Disease (No. per 1,000 Man-Years)		
		Angina Pectoris	Myocardial Infarction	Total Incidence
All transport drivers		0.32	2.28	2.60
All transport conductors		0.63	0.99	1.62
Only drivers	Downtown (central)	0.42	2.56	2.98
	Suburban (trams)	0.11	1.61	1.72
Only conductors	Downtown	0.77	1.23	2.0
	Suburban	0.32	0.48	0.8
Conductors	Downtown	0.77	1.23	2.0
Drivers	Suburban	0.11	1.61	1.72

incidence of clinical coronary disease is not without documentation. In previous reviews of available epidemiological data[17,18] we have emphasized that if the absence of socio-economic stress as found in industrialized societies is used as a standard of comparison, a better correlation can be obtained between it and the decreased incidence of clinical coronary disease than between a low fat dietary intake and coronary disease. Brock and Bronte-Stewart[5,6] pointed out in their studies in Capetown that, if job responsibility were used as an index, as good a correlation could be found between it and a higher incidence of myocardial infarction as was found with the dietary fat intake. In England a considerably greater incidence of myocardial infarction has repeatedly been noted among professional, executive and skilled labor groups compared with those of less skilled or unskilled occupations[18,29,39,42,49,60] In the study of Gertler and White[20] as well as that of Yater and associates,[58] although no difference was found between the dietary habits of young patients with coronary artery disease and those of the controls, considerable difference was found in the type of civil positions held by the two groups, the young patients with heart disease almost always having occupied positions of responsibility and frequently associated with occupational stress. The relatively higher incidence of myocardial infarction in those engaged in managerial, executive and professional occupations compared with those in less skilled and unskilled occupations is further well documented.* The pronounced geographic variation in incidence of mortality from coronary disease in this country may also be due to differences in occupational stress,[45] considerably higher mortality rates being found in the densely populated areas and in urban areas than in rural areas,[15,21,45] these differences being similar for both sexes.[15]

Osler described the typical patient with coronary artery disease as a "keen and ambitous man, the indicator of whose engines is always set at 'Full speed ahead.' " Dunbar[13] and Arlow[2] both concluded that a clear-cut personality pattern can be detected in many persons with coronary artery disease, characterized by, among other things, habitual overdrive and compulsive drive to success by means of hard work and self-discipline. It is of interest that in a recent study[41] of 100 patients with myocardial infarction that occurred before age 40, most were either holding down two jobs or working more than 60 hours a week at one job, the subjects almost without exception being aggressive, ambitious persons working beyond their normal capacity. Of further interest in this regard is the fact that among English physicians a sharp rise of myocardial infarction since 1946 has occurred only among the general practitioner group[30] suddenly compelled by the then new system of medical practice to treat a remarkable number of patients in the course of their daily activity.

If chronic exposure to those forms of socio-economic stress unique to industrialized societies is a major pathogenetic factor in the increasing incidence of clinical coronary disease in industrialized populations, several possible mechanisms might be operative, alone or synergistically. First, the effects of emotional stress on cardiovascular hemodynamics are profound and there is much evidence that organic vascular damage may eventuate from such effects,[4,38,57] probably in part due to endocrine engendered angiotoxic effects,[38,56] the resulting vascular damage predisposing and perhaps preceding subsequent lipid deposition, of greatest severity in the presence of an elevated plasma lipid content. A second possible mechanism implicates the direct effects of occupational stress upon the plasma lipids.

A relation between occupational stress and the plasma cholesterol content was shown by recent (and continuing) studies in our laboratory. That hormonal and possibly neurohumoral influences probably play an important role in the control of the plasma cholesterol content was strongly suggested by the demonstration that various types of emotional stress are uniquely capable of inducing significant and occasionally striking rises of plasma cholesterol.

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*7, 24, 36, 38, 42, 46.

Group	Type	No.	Aver. Age	Aver. Weight Jan 8	Aver. Weight Apr. 15	Aver. Weight June 10
A	TAX	18	38 (28-50)	182 (140-239)	181 (140-239)	182 (140-239)
B	CORPORATE	22	39 (28-56)	175 (147-196)	174 (147-193)	174 (146-193)

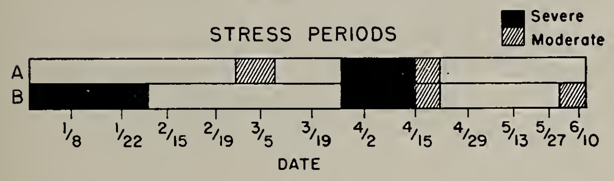


Chart 1.—Description of 42 accountants. Group A was made up of tax accountants and Group B of corporate accountants.

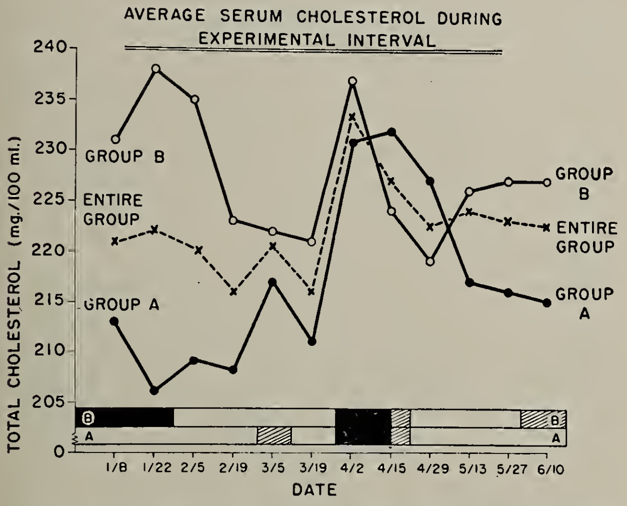


Chart 2.—Group A is made up of tax accountants, Group B of corporate accountants. Stress periods are indicated at bottom (solid black = severe), (diagonal lines = moderate).

From January 8 to June 10, 1957, specimens of blood for plasma cholesterol determinations were taken biweekly from 40 male proprietor accountants.[19,40] Each time blood was drawn the subjects were examined and questioned as to weight, diet, exercise and the occurrence of occupational and avocational emotional tension. Complete food diaries were kept during two separate seven-day periods. The accountants were divided into two groups of comparable size and age (Chart 1), one group made up of tax accountants, the other of corporate accountants. Although severe occupational stress was encountered in both groups during the April period before the deadline for filing tax returns, only the corporate accountants (Chart 1, Group B) incurred a comparably severe work stress during January. The average plasma cholesterol in each of the two groups is shown in Chart 2, the content being found to rise with the occurrence of occupational stress. Thus, a significant rise of average plasma cholesterol occurred in both groups coincident with the severe occupational stress of the April tax period, but only the corporate accountants (Group B) had a similar rise in January, coincident with a period when they, but not the tax accountants, had severe work stress. The fluctuations were not found related to any changes in weight, exercise or dietary intake of calories or of fat.[19]

SERUM CHOLESTEROL AT TIME OF:		ACTUAL RANGE OF EACH SUBJECT'S SERUM CHOLESTEROL
MAXIMUM STRESS		MAXIMUM SERUM CHOLESTEROL
AVERAGE:	252 mg./100 ml.	263 mg./100 ml.
RANGE:	(145 - 391)	(160 - 391)
S.E. MEAN:	±7.5	±8.8
MINIMUM STRESS		MINIMUM SERUM CHOLESTEROL
AVERAGE:	210 mg./100 ml.	200 mg./100 ml.
RANGE:	(138 - 354)	(127 - 314)
S.E. MEAN:	±6.8	±5.7
DIFFERENCE		DIFFERENCE
AVERAGE:	42	63
RANGE:	(2 - 125)	(31 - 125)
S.E. DIFF. MEANS:	±10.1	±10.5

Chart 3.—Average serum cholesterol at time of subject's maximum and minimum period of emotional stress (all types) as appraised by him.

Significant rises of plasma cholesterol also were observed in many of the subjects at times of unusual personal stress of an avocational nature. (Chart 3 shows the plasma cholesterol changes observed in a 43-year-old accountant with xanthelasma who, unknown to us, kept a daily record of his exposure to emotional stress of any origin, using his own arbitrary unit system.) Overall plasma cholesterol fluctuations as great as 125 mg. per 100 ml. were observed to occur in these subjects. However, since these rises occurred in some subjects at times of severe avocational stress as well as during periods of severe occupational tension, the cholesterol determinations also were correlated with the times each subject felt his emotional stress from any cause was both minimal and maximal during the experimental period. As shown in Chart 4, the differences at such times were not only highly significant but, with rare exception, each subject's highest plasma cholesterol was observed at the time the subject himself felt his emotional stress to be at its peak, and vice versa.

Epidemiologists in general have widely ignored demonstrations[31] of the inconstancy of plasma cholesterol content. That the plasma cholesterol is uniquely sensitive to the occurrence of severe mental stress already has been confirmed by several groups of investigators, in military personnel,[22] in patients with healed myocardial infarction[23] and in college students during examination week.[55] A hypothalamic influence is possibly suggested by the rapidity of the observed rises in certain instances and by the ob-

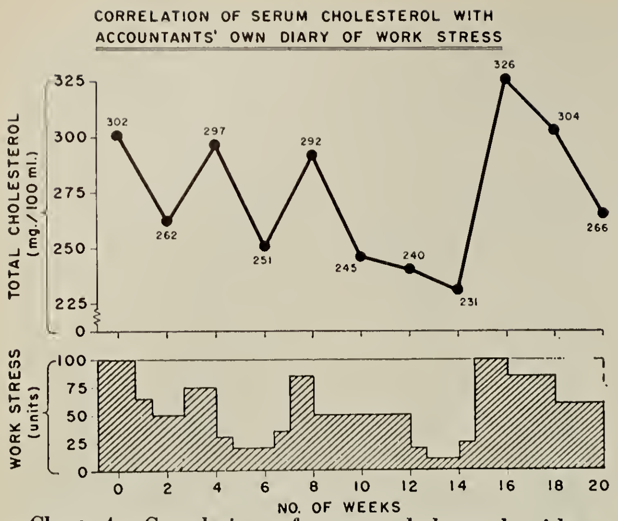


Chart 4.—Correlation of serum cholesterol with accountants' own diary of work stress.

servation that central nervous system stimulants, both experimentally and clinically, induce a rise of plasma cholesterol, with a lowering occurring during sedative therapy.[32,33]

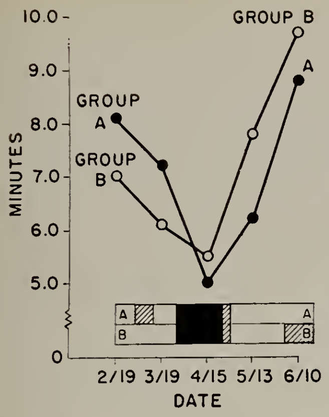
The relationship of increased cholesterol to stress indicates the adrenals are implicated. The effect of corticotropin (ACTH) and adrenocorticoids in ordinary dosage on the plasma cholesterol of humans is apparently neither striking nor consistently observed. Nevertheless, in connection with the significant and sometimes striking rise of plasma cholesterol observed in students during school examinations,[55] it is of interest that among students exhibiting an anxiety reaction during examination a significant rise of aldosterone and 17-hydroxycorticoid excretion occurs.[51]

These data are in harmony with the findings recently reported in the cooperative study of plasma lipids in American subjects[28] in which it was found that some rise of average cholesterol levels was noted in persons with higher blood pressures and, conversely, that a low blood pressure level was associated with a low plasma cholesterol. The latter correlation was particularly striking in the instance of penitentiary inmates, a group beset with various emotional problems but nevertheless uniquely "sheltered" from the effects of socio-economic and other occupational stress and in particular from the pressures of "lack of time." Thus, in contrast to the general similarity of the plasma cholesterol levels determined among large groups of different men from various parts of the country, the inmates of two different penitentiaries consistently had significantly lower plasma cholesterol, not ascribable to dietary differences. It is therefore perhaps significant that in a recent study[26] in which normal prisoners were used as controls, it was found that the prison inmates had low levels of adrenocortical excretion.

Although the causal mechanism has not been elucidated and although the role of hormonal secretion in this regard has not been clarified, it seems clear that a rise of plasma cholesterol, often of profound degree, may occur in response to severe occupational and other emotional stress. As a possible corollary, we have proposed[19,40] that *chronic* exposure to occupational and other forms of socio-economic stress unique to Western civilization may be a major factor in the higher average plasma cholesterol levels found in Western man than in members of nonindustrialized societies. If this proposition were valid, it should be possible to demonstrate that among similar age groups with comparable patterns of exercise and diet, the average plasma cholesterol is significantly higher in persons chronically exposed to severe occupational stress than in groups free of such stress. Our current investigations of this problem are as yet too incomplete to present, but it can be stated that clear-cut differences in average plasma cholesterol are being found among subjects chronically exposed to severe occupational stress as compared with various control groups of subjects who are relatively or completely free of such stress.

A third possible mechanism by which the exposure to emotional stress might affect the coronary arteries is by precipitating thrombotic occlusion. Although *clinical* coronary heart disease is a consequence of atherosclerosis, often its occurrence is not simply the end result of progressive atherosclerotic changes. It must be emphasized that coronary atherosclerosis is ubiquitous in Western man, but clinical coronary heart disease, and in particular the occurrence of myocardial infarction, is frequently engendered by a thrombotic complication of the atherosclerotic substrate. Indeed, the inference in many epidemiological and other studies that the incidence of myocardial infarction reflects the incidence and the severity of the atherosclerotic substrate would appear to be a grave error,[17,18] since these conditions are, in part, two separate entities, and the occurrence of thrombosis, particularly in younger persons, may be only partly related to the severity of the underlying atherosclerotic changes.[47]

The importance of the thrombotic factor in the incidence of coronary disease morbidity and mortality is further shown by the fact that the rather rapid decline in mortality from this cause in wartime Scandinavia[37,50] appears to be ascribable primarily to a decreased incidence of all thromboembolic phenomena.[12,50] It is also attested, of course, by the success of sustained anticoagulant therapy in preventing myocardial infarction in patients with known severe coronary atherosclerosis. Moreover, the pronounced increase of myocardial infarction in



AVER. COAGULATION TIME (min)

DATE	GROUP A	GROUP B
2/19	8.1 ± 0.27* (5.5 - 10.7)+	7.0 ± 0.80 (3.0 - 9.0)
3/19	7.2 ± 0.26 (4.0 - 10.0)	6.1 ± 0.60 (4.2 - 8.0)
4/15	5.0 ± 0.38) (3.0 - 7.0)	5.5 ± 0.47 (4.0 - 6.5)
5/13	6.2 ± 0.33 (4.0 - 8.5)	7.8 ± 0.96 (5.5 - 10.5)
6/10	8.8 ± 0.63 (5.5 - 12.5)	9.7 ± 0.58 (8.0 - 11.5)

*Standard Error of Mean
+Range of Values

Chart 5.—Average blood coagulation time. Group A is made up of tax accountants, Group B of corporate accountants.

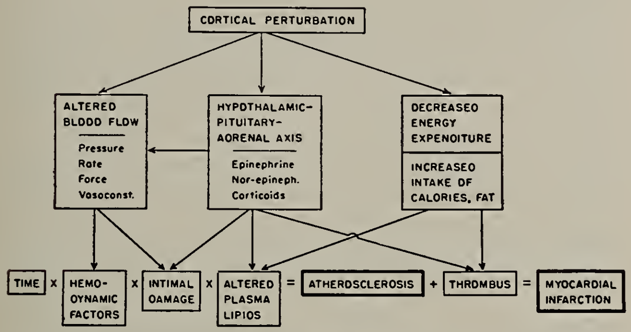


Chart 6.—Concept of possible relationship of coronary atherosclerosis and thrombotic occlusion to intimal derangement, to quantitative and qualitative plasma lipid abnormality, to hemodynamic factors and to blood coagulation.

this country and in England in the past five decades is ascribable far more to an increased incidence of coronary thrombosis[30,47] than to any increase either in the incidence or severity of the atherosclerotic substrate.[27,30,43] Nor, for that matter, can it reasonably be ascribed to any significant increase either of the plasma cholesterol or of the dietary fat intake.[34,35]

It has long been recognized that emotional stress significantly accelerates blood coagulation[9,44] and there is good reason to believe that this may be mediated by an augmented secretion of epinephrine[52,53] and possibly also of adrenal corticoids.[10,11] The occurrence of coronary thrombosis and myocardial infarction at times of emotional stress is so well documented[1,10,14,38,54] that it would appear foolhardy simply to ignore its probable causal role in such instances. It is therefore of probable significance that we have recently observed that an acceleration of blood coagulation occurs at times of severe occupational stress. Thus, in the study of 40 accountants referred to above,[19,40] blood clotting time was determined at monthly intervals under carefully controlled circumstances. As shown in Chart 5, a significant acceleration of average clotting time occurred in both groups of subjects during the period of severe work stress induced by the April 15 deadline for filing tax returns. It is possible therefore that exposure to severe occupational stress may increase the hazard of the thrombotic complication by bringing about an acceleration of blood coagulation.

On the basis of considerable clinical and experimental evidence, the possible role that is played by the occupational and socio-economic stress unique to Western man in the pathogenesis of his increasing clinical coronary disease, can no longer be neglected simply because the stress factor is difficult to quantitate. Thus, if coronary atherosclerosis and thrombotic occlusion are related to intimal derangement, to quantitative and qualitative plasma lipid abnormality, to hemodynamic factors and to blood coagulation (Chart 6), it already has been shown that occupational and other emotional stress of certain specific types, are capable of affecting each of these factors. The psychological stresses accompanying responsibility are stressful to some persons, particularly the ambitious, conscientious, aggressive persons who cannot adapt easily. Considerable evidence suggests that such persons are predisposed to develop clinical coronary heart disease.

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Factors in Coronary Artery Disease

Cigarette Smoking and Exercise

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• A study was made of certain information from studies of the State Department of Public Health which bear upon the hypotheses that cigarette-smoking and physical exercise are factors in coronary artery disease. The data supported an association of the disease with cigarette smoking, but not with exercise. An incidental finding was a strong relationship between coronary heart disease and the beginning of the wearing of reading glasses or bifocals at an early age.

In the present state of investigations aimed at determining the etiology of coronary artery disease it appears desirable to give serious consideration to multiple factors rather than seeking to find a single cause.

IN VIEW OF THE large and increasing number of deaths from coronary artery disease—it now causes about one-third of all deaths among men in California—every possible effort is needed to investigate causative factors.

All research arms, clinical, laboratory and epidemiological, must be called into play. And their combined endeavors should take into account one of the most difficult concepts in modern preventive medicine: The idea of multiple factors in causation of a particular disease. As a result of the many victories in the bacterial era of medicine, we have grown so accustomed to looking for the cause of a disease that we find it difficult to grasp the notion that a disease may have several causes. It is a struggle to keep in mind the possibility of *causative factors* rather than *the cause.*

This idea may perhaps be illustrated by the experience with so-called battle fatigue, personality breakdowns, in the North African campaign of World War II. What caused them? Some investigators find basic weaknesses in the psychic make-up of individuals affected and thus attribute the condition to personal inability to withstand the stress of severe battle. Other investigators point to the fact that the longer the men remained in combat the more likely they were to break down, and thus attribute the condition to excessive strain. Both types of factors —endogenous and exogenous—were undoubtedly involved. In various individual cases one or the other type of factor may have played the greater or lesser role. The man with little psychic reserve (or basic personality weakness) would break down early. On the other hand, almost every man, no matter how strong his personality, appeared to have some breaking point with longer and longer exposure to severe battle stress.

Coronary artery disease, also, may be a condition whose onset is determined by multiple factors, both exogenous and endogenous. In the search for causative factors in this disease at present, we suffer no dearth of hypotheses. One may even say that the hypotheses are so numerous that a particular fact may be "explained" by any of several of them.

A statement in the *British Medical Journal*[5] exemplifies this point: "Some years ago statistics were produced to show that coronary thrombosis fell heavily upon the learned professions because they bear the stress of responsibility, the clergy being protected by their spiritual tranquility. Later, when it became fashionable to regard our professions with less respect, similar statistics proved that coronary thrombosis was due to lack of exercise from traveling by car, the clergy being saved on bicycles. Now that cars are in general use, comparable figures prove that fat is our downfall, the clergy being spared by a leaner diet."

Today we are examining the data from several California studies which bear upon four hypotheses as to the etiology of coronary artery disease—fat, emotions, cigarette smoking and exercise. This communication will emphasize the latter two factors because of access to certain sources of data which bear upon them.

The first source consists of data obtained by follow-up observation of 3,994 longshoremen who received a multiphasic screening examination in 1951.[8] At the time of examination the men responded to a brief question concerning their cigarette-smoking habits. This permitted classification of the participants into two groups: Light or nonsmokers (less than a pack a day), and heavy smokers (a pack or more a day). The mortality rate from coronary artery disease in the two groups, observed during the five-year follow-up, was studied.

Part of a Panel Discussion on the California Epidemiological Studies of Coronary Heart Disease presented before the Section on Public Health at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

From the Bureau of Chronic Diseases, California State Department of Public Health, Berkeley 4.

TABLE 1.—*Coronary Artery Disease Mortality Rates per 1,000 Person-Years of Risk for Males by Age Group and Smoking Group Three Prospective Studies (Mortality Rates per 1000)*

			Coronary Deaths per Person-Years	
	Light and Nonsmokers*	Heavy Smokers†	Light and Nonsmokers	Heavy Smokers
EXHIBIT A				
Buechley, Drake and Breslow:* (Longshoremen)				
Age 35 to 44 years	1.29	2.52	4/3100	6/2380
Age 45 to 54 years	1.63	4.55	7/4285	12/2635
Age 55 to 64 years	6.35	11.59	19/2990	16/1380
Age 65 to 74 years	10.26	9.52	12/1170	2/210

*Unpublished material.

				Coronary Deaths per Person-Years		
	Nonsmokers	Moderate Smokers	Heavy Smokers	Nonsmokers	Moderate Smokers	Heavy Smokers
EXHIBIT B						
Hammond and Horn (1958):[4]						
Age 50 to 54 years	2.71	5.43	6.79	90/33255	213/39226	203/29897
Age 55 to 59 years	4.31	8.78	10.65	142/32920	258/29385	199/18685
Age 60 to 64 years	7.33	14.02	14.11	204/27817	235/16762	129/9142
Age 65 to 69 years	12.47	19.66	19.44	273/21892	158/8037	73/3755
EXHIBIT C						
Doll and Hill (1956):[2]						
Age 35 to 54 years	.44	1.47	1.84	5/11266	35/23751	28/15248
Age 55 to 64 years	7.34	4.45	6.98	14/1907	29/6514	36/5155
Age 65 to 74 years	11.13	10.53	14.85	12/1078	41/3893	34/2290
Age 75 and over	15.19	22.27	24.93	13/856	43/1931	18/722

*Includes those who smoke less than one pack a day. †Those who smoke more than one pack a day.

The other source of data is the California Health Survey, which covered a representative sample of Californians (about 32,000 persons), in 1954-1955.[1,3] Persons in whom coronary disease was disclosed in the survey (or by death later of this disease) were matched with controls of the same age and sex selected from the survey population. The controls and the persons with the disease were then reinterviewed (the next of kin was interviewed if the patient had died) to ascertain a number of characteristics which might be related to the coronary artery disease. In this reinterview, a question as to lifetime cigarette-smoking habits permitted classification of both the persons who had the disease and the controls into four groups: Nonsmokers; light smokers (a quarter or a half pack a day); moderate smokers (a full pack); and heavy smokers (more than one pack).

TABLE 2.—*Data Showing Degree of Smoking—Light, Moderate or Heavy—Most Often Associated with Coronary Artery Disease (California Health Survey, Men, 64 Years and Under)*

	Persons with Disease*	Controls*	Adjusted Ratio, Cases to Controls*
Total	88	70	
Reported amount of cigarette smoking:			
Nonsmokers	12	20	1:2
Light (¼ to ½ pack)	14	13	7:8
Moderate (1 pack)	35	21	4:3
Heavy (1½ to 2 packs)	27	16	4:3

*The number of persons with the disease (88) and of controls (70) are sufficiently large for the usual statistical tests of significance. There are more cases than controls because the men reporting "heart disease" and those reporting no disease but dying of coronary disease were added after controls were selected. Ratios, as reported in tables, are corrected to adjust for the unequal numbers of cases and controls.

CIGARETTE SMOKING

In Table 1, Exhibit A, the coronary artery disease mortality rate of the light and nonsmoking longshoremen is compared with that of the heavy smokers. Up to age 65 the coronary artery disease mortality rate in longshoremen who reported smoking a pack or more a day was roughly twice the rate in longshoremen who smoked fewer cigarettes or none at all.

By itself this finding might not be considered very impressive. However, it appears more significant when examined alongside the data from two other studies. Exhibit B in the same table shows the coronary artery disease mortality rates derived from the American Cancer Society study of Hammond and Horn,[4] and Exhibit C gives the rates from the study of English physicians by Doll and Hill.[2]

These coronary artery disease mortality rates show a remarkable similarity in their association with degrees of cigarette smoking. Further investigation of this association is being carried out on selected populations of Californians.

Additional evidence indicating an association between cigarette smoking and coronary artery dis-

TABLE 3.—*Data from Hegglin and Keiser[6] on Coronary Artery Disease Cases and Controls as Related to Cigarette Smoking (Men Under 50 Years)*

	Persons with Disease	Controls	Ratio, Cases to Controls
Total	153	151	
Nonsmoker	10	38	1:4
Light smoker (less than 1 pack)	79	81	1:1
Heavy smoker (1 to 2 packs)	49	28	7:4
Very heavy smoker (more than 2 packs)	15	4	4:1

ease comes from comparison of the group who had the disease with the control group in the California Health Survey study (Table 2). There were many more moderate to heavy smokers in the group with disease than in the control group. Also, among those who had the disease the incidence was higher in those who smoked a pack or more a day than in those who smoked less or not at all.

An even more striking relationship appears in the data of Hegglin and Keiser,[6] who made a comparison of controls and persons with coronary artery disease in Switzerland (Table 3).

We thus have data from two types of coronary artery disease investigations in California—a study of cases and controls in which the cigarette smoking data were secured retrospectively, and a study in which a population was first classified with respect to amount of cigarette smoking and then followed to determine subsequent mortality from coronary artery disease. Both types of investigations substantiated the association of coronary artery disease with cigarette smoking. Similar studies in other parts of the country and the world have yielded similar findings.

EXERCISE

Another hypothesis receiving much current attention is that coronary artery disease occurs more frequently among persons who perform lesser amounts of physical exercise. Studies by Morris[7] and others have given credence to this idea.

Several questions were asked of the persons with coronary artery disease from the California Health Survey (and the control group) to test this hypothesis. The persons with the disease and the controls were classified according to whether they reported that their occupations entailed "much less labor" than the average, "a little less," "a little more" or "much more." Admittedly a crude measure, this classification revealed only a slight difference: The less heavy the work, the higher the coronary artery disease rate as compared with the controls (Table 4).

TABLE 4.—*Data on Reported Heaviness of Work as Related to Coronary Artery Disease (California Health Survey, Men, 64 Years and Under)*

	Persons with Disease*	Controls*	Adjusted Ratio, Cases to Controls*
Total	86	72	
Much less labor	30	23	1:1
A little less labor	22	11	5:3
A little more labor	18	21	3:4
Much more labor	16	17	3:4

* (See footnote, Table 2.)

TABLE 5.—*Relation of Reported Activity of Work to Coronary Artery Disease (California Health Survey, Men, 64 Years and Under)*

	Persons with Disease*	Controls*	Adjusted Ratio, Cases to Controls*
Total	89	68	
0 hours sitting (heavy)	33	33	3:4
1 to 4 hours sitting (moderate)	35	21	5:4
5 or more hours sitting (light)	21	14	8:7

* (See footnote, Table 2.)

TABLE 6.—*Relation of Reported Participation in Sports to Coronary Artery Disease (California Health Survey, Men, 64 Years and Under)*

	Persons with Disease*	Controls*	Adjusted Ratio, Cases to Controls*
Total	80	60	
0 to 1 sport	27	21	1:1
2 sports	19	20	3:4
3 or more sports	34	19	4:3

* (See footnote, Table 2.)

Another, somewhat less subjective, question was asked in a further attempt to ascertain the amount of physical exercise involved in occupations. Both the persons with the disease and the controls stated the number of hours per day they sat while working. The groups were then classified (Table 5). Essentially no difference appeared when the data were examined in this way.

Many persons, of course, get a good deal of exercise away from the job. For information on the possible influence of this factor, the controls and the persons with disease were asked to list the sports in which they had participated as adults. Table 6 presents a rough classification based upon this factor. The data did not show any favorable influence from exercise of this type upon the incidence of coronary artery disease. If anything, the rate was higher for those who stated that as adults they engaged in three or more sports than it was among persons who reported less participation in sports.

In summary the data obtained as to exercise did not indicate any strong and consistent relation of heart disease to degree of physical exertion—on the job or off. It should be emphasized that the measures used to determine the degree of exercise were quite crude. However, if amount of exertion were a cru-

TABLE 7.—*Relation of Reported Age at Onset of Presbyopia to Coronary Artery Disease (California Health Survey, Men, 64 Years and Under)*

	Persons with Disease*	Controls*	Adjusted Ratio, Cases to Controls*
Total	70	55	
Before 45 years (early)	32	8	7:2
45 to 49 years (average)	17	17	3:4
50 years and older (late)	21	30	1:2

* (See footnote, Table 2.)

cial factor, even a crude measure would be expected to show some association. More work on this aspect of the subject is certainly needed.

PRESBYOPIA

Of some interest in the study of factors associated with coronary artery disease is a finding that suggests a relationship with presbyopia, included in the study as a measure of physiological aging. The subjects in the series of persons with disease and persons used as controls were questioned as to the age at which they first used glasses for reading. If the persons had worn glasses during early adult life, the age when bifocals were first used was recorded; if they put on glasses, for reading only, during middle life the age was similarly recorded.

Undoubtedly many factors, of which presbyopia is only one, influence the age at which glasses are first used for reading. Others include motivation for reading and amount of reading, willingness to withstand discomfort in reading and various social factors. Hence the age of putting on reading glasses is merely suggestive of the onset of presbyopia, and the question, as asked, was a crude means of arriving at a measure of this condition.

Table 7 shows a rather striking association. Among persons with coronary artery disease, a large number had begun using reading glasses or bifocals before forty-five.

Before embarking upon extensive studies to explain this apparent association of presbyopia with coronary artery disease, it would be desirable to determine the relationship itself more certainly. The simplicity of the measure, and the apparent strength of the relationship seem to warrant such determinations.

ACKNOWLEDGMENT: The cooperation of the persons who participated in the study and of their physicians who supplied the related diagnostic information is gratefully acknowledged.

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Social Security Footnotes

THOSE WHO SPONSOR Social Security regard professionals as a source of income and admit that most of them will never claim any benefits. Professional people are to be the source of funds to pay the "benefits" of others.

—From the Department of Public Relations, American Medical Association

Left Heart Catheterization

The Clinical Importance of Findings

JEROME HAROLD KAY, ***M.D.,*** **and ROBERT M. ANDERSON,** ***M.D.,*** **Los Angeles**

• Left heart catheterization using the transbronchial route to obtain pressures in the left atrium and left ventricle was used successfully in 29 cases with no mortality or morbidity. It was found to be useful in differentiating between mitral stenosis and mitral insufficiency, as well as determining the amount of aortic stenosis present when there was involvement of the aortic valve. The technique was also helpful in determining which is the predominant lesion when there is a disease of the aortic and mitral valves.

In two patients in a series of 29, data obtained by left heart catheterization forestalled operation on the basis of a mistaken diagnosis of mitral stenosis when actually no mitral valvular disease was present. In another eight patients, the predominant lesion was found to be mitral stenosis rather than mitral insufficiency as it was thought to be before catheterization. In two patients, who had only systolic murmurs, catheterization revealed mitral stenosis rather than mitral insufficiency. In four patients who were thought to have mixed valvular disease, left heart catheterization showed only aortic valvular disease.

THE USUAL CLINICAL METHODS of diagnosis may be relied upon in most cases for the correct diagnosis of typical valvular defects of the heart. However, occasionally these methods may be misleading. In certain valvular defects left heart catheterization will eliminate these uncertainties. This procedure is valuable in a number of circumstances: In evaluating the degree of mitral stenosis in some patients in whom it is difficult to evaluate the symptoms, in determining the more significant lesion when mitral stenosis and insufficiency are associated in determining the severity of aortic stenosis and in determining the significance of the various lesions when aortic and mitral disease are present.

The development of surgical procedures on the mitral and aortic valves brought about a need for more precise diagnostic methods for determining the nature and extent of abnormality of these valves. In 1952, Facquet, Lemoin, Alhomme and Lefebvre[3] in France and in 1953 Allison and Linden[1] of Leeds described a method of obtaining left atrial pressures by the transbronchial route. Recently Morrow, Braunwald, Haller and Sharp[4] of the National Heart Institute reported on 500 cases in which this procedure was used. They extended the technique by passing a catheter down the left atrial needle into the left atrium and on into the left ventricle. In 1953 Bjork, Malmstrom and Uggla[2] in Craaford's clinic in Sweden developed the posterior percutaneous puncture technique. This method also has been extended to include left ventricular catheterization by passing a catheter through the needle into the left atrium and then advancing this catheter into the left ventricle. The ability to obtain the left ventricular pressure using both of these techniques, and therefore to determine accurately the presence or absence of any abnormal pressure gradients across both the aortic and mitral valves is of great aid in the diagnosis of certain types of heart disease. Because of the reportedly high morbidity and mortality associated with using the posterior percutaneous route, we have not employed this method but have used the transbronchial method exclusively.

This communication is a report of the results in 29 patients in whom the transbronchial approach to the left atrium and left ventricle was used. The technique used was essentially that described by Morrow.[4] The patient is prepared for left heart catheterization by fasting for six hours. Oral barbiturate is given an hour before catheterization and meperidine and scopolamine are given a half hour before the procedure. The pharynx, larynx and trachea are anesthetized topically with cocaine, pontocaine and xylocaine. Electrocardiograph electrodes are placed in position and a Cournand needle is inserted into the femoral artery. A standard 7 or 8 mm. bronchoscope 40 cm. in length is advanced to the carina and a point on the anterior wall of the left main bronchus about 1 cm. from the carina is selected for the puncture. Effort is made to direct the needle as far anteriorly as possible. This is facilitated by rotation of the bronchoscope so that its beak lies posteriorly. The needle, filled with saline solution, is introduced into the bronchoscope and a zero or base line pressure tracing is recorded before the needle pieces the bronchial mucosa. The needle is inserted through the bronchus and into the left atrium and is immediately irrigated with a

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sterile saline and heparin solution. The left atrial pressure is recorded during several respiratory cycles and during a period of apnea in mid-inspiration. The left ventricular catheter is then introduced into the proximal end of the needle. The catheter is slowly advanced into the atrium and on into the ventricle. The left ventricular pressure is recorded. Simultaneous pressures are recorded from the Cournand needle and from the catheter in the left ventricle and a "pull-out tracing" is made as the catheter tip is slowly withdrawn from the left atrium.

Analysis of the data obtained by this method in the first 29 patients in whom it was used at The Saint Vincent's Hospital was informative and helpful. In two of the patients, the diagnosis before cardiac catheterization was possible mitral stenosis. However, left heart catheterization revealed no evidence of mitral disease. In five patients, the precatheterization diagnosis of mitral stenosis was confirmed. One patient with hemoptysis was known, even before catheterization, to have mitral stenosis and also bronchiectasis, but the severity of the mitral disease was not known. Left heart catheterization revealed that it was quite severe, and the hemoptysis was therefore ascribed to it rather than to the bronchiectasis. In eight cases in which the diagnosis before catheterization was pronounced mitral insufficiency as well as mitral stenosis, mitral stenosis was found to be the predominant lesion. Two patients who were thought to have mitral insufficiency without mitral stenosis, were found upon cardiac catheterization to have mitral stenosis without any evidence of mitral insufficiency. Four patients were thought to have aortic stenosis, and left heart catheterization verified this diagnosis. Four patients were thought to have mixed lesions of the mitral and aortic valves, such as mitral stenosis, mitral insufficiency as well as aortic stenosis or aortic stenosis and mitral insufficiency. Left heart catheterization revealed that they had aortic disease without evidence of mitral disease. Another patient, who was thought to have only aortic insufficiency, upon left heart catheterization was found to have mitral stenosis, mitral insufficiency and aortic insufficiency. In a case in which it was believed the patient had mitral stenosis and an atrial septal defect, no end diastolic gradient across the mitral valve was noted when catheterization was done. In this case the procedure was very informative, for at operation a tight mitral stenosis as well as an interatrial septal defect was observed. This study revealed that in the presence of both lesions there will be no gradient across the valve. In one patient we were unable to pass the needle into the left atrium. Roentgen films showed pronounced scoliosis and a normal sized left atrium. The patient probably did not have heart disease. We also had technical difficulty in six other cases: We could not pass the catheter into the left ventricle, usually because of pronounced mitral insufficiency. In these cases each time the catheter approached the mitral valve it was washed back by the systolic jet. However, the left atrial pressure was enough to make the diagnosis in these patients.

ADDENDUM

Since this paper was submitted 23 more patients have had left heart catheterization with similar results and no complications.

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Treatment of Melanoma—Success or Failure?

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• The treatment of melanoma should be by radical surgical excision of the primary lesion and dissection of the regional nodes.

Where possible this should be done in anatomic continuity; otherwise in physical discontinuity but at the same time.

If maximum salvage is to be achieved the nodal dissection must be effected before there is clinical evidence of involvement by metastasis.

Amputation of extremities should be reserved for cases in which there is evident metastasis between the original focus and the regional lymph node areas.

THE PROBLEM of definitive treatment of melanoma is complex. The factors that may contribute to success or failure are so many and various that any attempt at analysis is necessarily tenuous. Because of the unsatisfactory end results that have been achieved in the treatment of melanoma to date, considerable effort has been expended in analyzing a rather large series of cases. The emphasis has always been on consideration of factors that may or may not have contributed to successful management. Failures and deaths have been admitted but more or less disregarded as something unpleasant and even inevitable.

This discussion is a summary of an experience with the treatment of melanoma in private practice, with emphasis upon analysis of the failures, since the reasons for failure may be far more important than the reasons for success.

This report covers a consecutive series of 145 patients observed in private practice. Table 1 summarizes the clinical status of the patients at the time of their first visit. Of those who were then still eligible for definitive treatment, only 27 had had no treatment and no biopsy of the lesion, an additional seven had had biopsy, but no treatment and 47 had had definitive treatment of the primary lesion. Despite the fact that eight of these 81 patients already had disseminated metastasis, responsibility was accepted for their care and the 81 cases are regarded as the definitive group for analysis. Another 21 patients were not observed until after their treatment elsewhere was completed. They have been cared for since that time, but, since no responsibility for planning their care was involved, they are not included in the definitive group. The final 43 patients were seen in consultation only, almost invariably on a single occasion; while some responsibility is certainly accepted for their subsequent care, the author has not been in a position to follow their course and so has excluded them also from the definitive group.

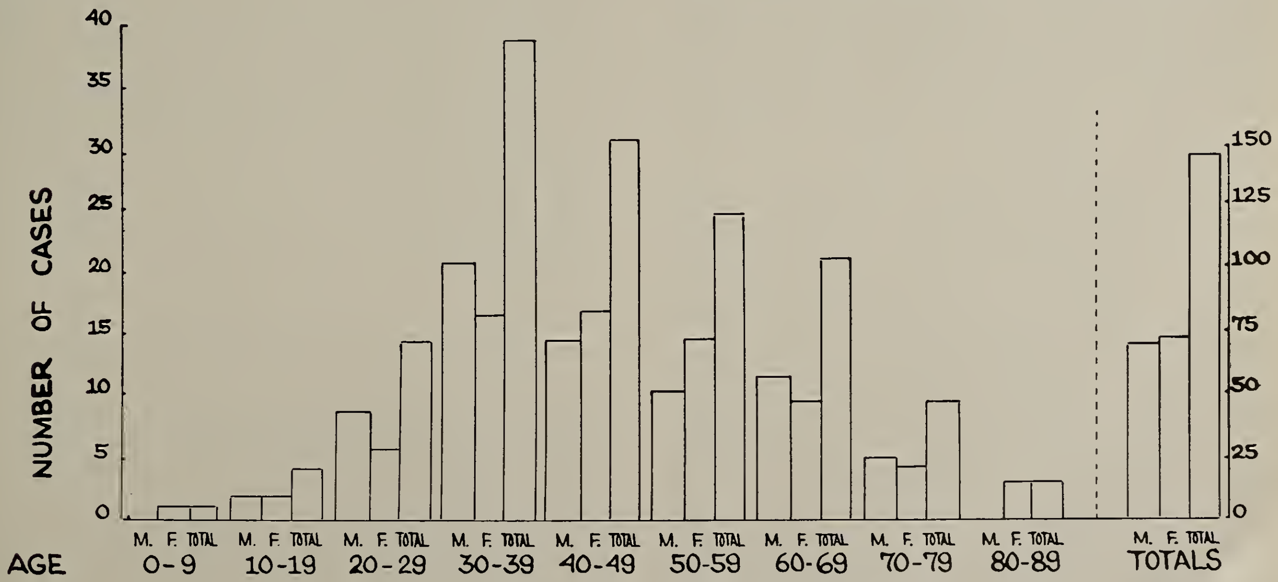

Chart 1.—Data on age and sex of patients with melanoma.

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TABLE 1.—*Clinical Status of 145 Patients with Melanoma at Time of First Visit*

		Stage of Disease			
Previous Treatment	Totals	Limited to Primary	Metastasis to Regional Nodes	Disseminated Disease	Other
None	34*	23	7	4	....
Primary treated	47	35	8	4	....
Definitive treatment complete	21	....	....	7	14†
Consultation only	43	4	5	11	23†
	145	62	20	26	37†

*7 previously biopsied.
†Usually free of evident disease; a few with local recurrence.

Chart 1 gives the sex distribution of the total number of cases divided into decades, and is of interest only in demonstrating that melanoma is a disease primarily of early adult and middle age. Table 2 is an attempt to summarize the factor of delay in treatment. Patients are usually very indefinite about any detail in regard to activity of the lesion. However, for those from whom the information could be elicited, half had noted some change for more than six months. The second column indicates the delay, in 47 cases, from the time of excision of the primary focus to the time the patient was admitted to this series.

Patients appear reluctant or unable to give accurate information about early changes in a mole. However, about a third described an increase in size; a similar number stated that there was ulceration or that the lesion bled when injured slightly. A few described changes in pigmentation. In six of these 81 cases the primary lesion was never found, the first intimation of trouble having been the development of regional node metastasis. It is difficult to ascertain the role that injury may play in activating nevi to a malignant phase. In only two instances did patients suggest that repeated minor injury, such as shaving, might have some bearing on this change. Again five reported single major injuries, such as severe blows, but probably these incidents were all coincidental and had nothing at all to do with the development of a malignant status.

Table 3 shows the location of the primary lesions in cases in which they could be found. It should be noted that 40 of them were about the head and neck, including eight ocular primary lesions; 19 were on the upper extremity; 33 were on the trunk, including one in the anogenital area; 47 were on the lower extremity; in six cases a primary focus was never found. Table 4 indicates the size of the untreated lesions. When first seen, 36 had already been removed; 23 were less than, and 16 were more than two centimeters in mean diameter.

TABLE 2.—*Time from First Notice of Activity in Lesion to Beginning of Treatment*

	From "Activity" to First Treatment	From First Treatment to Time First Seen by Author
1 month or less	2	22
1 month to 6 months	10	8
6 months to 12 months	8	1
More than 1 year	7	16
Information not available	54	....
Previously untreated	....	34
Totals	81	81

TABLE 3.—*Locations of Primary Lesions*

Head and neck		40
Facio-scalp	32	
Ocular	8	
Upper extremity		19
Forearm and hand	4	
Arm	15	
Trunk		33
Lower extremity		47
Thigh	9	
Leg	19	
Foot	19	
Never found		6
Total		145

TABLE 4.—*Size of Primary Lesion (Mean Diameter)*

Less than 1.0 cm.	10
1.0 cm. to 1.9 cm.	13
2.0 cm. to 4.0 cm.	14
More than 4.0 cm.	2
Previously excised	36
Occult	6
Total	81

The total definitive treatment to the primary lesion, whether done by the author or elsewhere, is shown in Table 5. It is notable that 14 patients had had only excisional biopsy and seven only cauterization. Most of these procedures had been done some time previously and enough time had elapsed to suggest that there would be no further trouble with the primary lesion. In five instances there was only an indefinite history of pigmented lesions having been "removed" several years before. In 50 cases

TABLE 5.—*Total Definitive Treatment to Primary Lesion*

Excision biopsy only	13
Cauterization only	7
"Removed" only	5
Primary radical excision	28
Secondary radical excision	22
No discoverable primary	6
Total	81

there was either primary or secondary radical excision of the original foci. In six instances, it was not possible to discover a primary site.

The treatment to the regional lymph nodes is summarized in Table 6. A total of 31 patients had radical node dissections either in continuity with the removal of the primary lesion or at the same time or at least within two months of the time of the original excision. The author now believes that "dissection in continuity," both anatomically and temporally, is the treatment of choice, but accepts the fact that a planned period of delay is still regarded as acceptable management. These 31 patients may all be regarded as having had node dissection without significant delay. Twenty-four of the 31 are still alive and well, free of any sign of recurrence. An additional 15 patients had node dissection after considerable delay for various reasons. Only six of them were alive and well at the time of this report. Thirty-five patients never had nodal dissections, or had only excision for biopsy.

The reasons for withholding or long delaying nodal treatment are indicated in Table 7. It was thought that the treatment of the primary neoplasm probably had been curative in 15 of the 35 cases in which nodal dissection had never been done. Included were one case of juvenile melanoma and the eight cases of orbital melanoma. Further treatment was refused by four patients, while in nine there was no justification for node dissection because the primary disease was never controlled. There were five examples of midline lesions in which it was impossible to determine which nodal area to dissect. Intercurrent disease in one patient and senility in another contraindicated operation. Among the cases of delayed nodal dissection, there were eight in which it was thought that the primary disease was cured by the original procedure; but in five cases this was not true, and the delay may well have been responsible for the death of all five patients. In the one instance in which there was long delay of nodal dissection because of the midline location of the melanoma, the disease was also lethal. The two patients who did not have nodal dissections because of age and intercurrent disease, respectively, also died of melanoma.

TABLE 6.—*Definitive Treatment of Regional Nodes*

Radical node dissection:	
In anatomic continuity with primary lesion	8
At same time primary treated but not in continuity	6
After planned delay of:	
2 months or less following treatment of primary	17
2 to 6 months after treatment of primary	3
7 to 12 months after treatment of primary	4
More than 12 months after treatment of primary	8
No definitive treatment, or biopsy only	35
Total	81

TABLE 7.—*Factors Producing Delay or Omission of Nodal Dissection*

		Delay from Primary Treatment to Dissection		
	No Dissection	2 to 6 Months	6 Months to 1 Year	Over 1 Year
Treatment of primary "cured" patient	15	1	1	6
Refused treatment	4	----	----	----
Primary disease never controlled	9	----	----	----
Midline lesion	5	----	1	----
Other	2	2	2	2
Totals	35	3	4	8

Many surgeons, pessimistic over the salvage being obtained for melanoma of the extremities, have been goaded by their poor results toward increasingly radical operation. Some investigators[5] have gone so far as to recommend routine amputation or disarticulation of the offending member, with nodal dissection in continuity, as the treatment of choice, particularly when regional metastasis is evident. I believe that the questionable improvement in salvage obtained by such mutilating procedures would be more than offset by the economic and functional loss to the entire group of patients involved and therefore have restricted the application of amputation to patients in whom recurrent disease has developed between the treated primary and the area of nodal dissection.

Obviously, if there is active disease between the treated primary and the previously dissected nodal area, no treatment other than amputation offers any hope for success. In three instances such a sequence of events made amputation of an extremity necessary; two of the patients are dead and one remains free of disease, indicating that in this situation the chance for cure is remote indeed. Further, no illusions are held as to "cure" in the other case although the patient had been free of disease for two years at the time of this report. This minuscule group of three cases might be cited as an argument for primary amputation as the treatment of choice for a melanoma of the extremities. On the other hand, of the 17 patients in whom both primary and regional radical operation, concurrently or within two months, was done, 14 were alive and free of disease at the time of this report, two were dead, and one was alive with disease. Although there are not five-year figures, if a routine policy of amputation of the extremity had been applied to these patients, 17 extremities would have been amputated to date; but 14 were alive and free of disease without such drastic measures, and only two patients might have benefited from amputation.

PATHOLOGIC CLASSIFICATION

The group included only one case of "juvenile melanoma." This was in an eight-year-old child, and five years later she remained well. In two cases the lesions were described by the pathologist as "nonmalignant" or "unable to metastasize." Because of such opinions, node dissections were not done and both patients died of generalized metastasis. Three lesions were stated to be amelanotic, while six primaries were never found despite excision of all neighboring nevi. All other lesions in the series were simply designated as melanoma, without reservation as to their fully malignant nature.

Of interest was the condition of the nodes at the time of the node dissection, indicated in Table 8. Of 23 patients who had "negative" nodes at the time of the dissection, 21 were alive and well at the time of this report. Of five with but a single node involved, two were known to be free of disease, one was dead and two were lost to follow-up. Of the 20 patients who had multiple node involvement, only three were free of disease at the time of this report. Such data imply that prompt treatment of melanoma (including nodal dissection) is probably of prime importance in control of the disease. One may state that if the nodes are "negative" at the time of nodal dissection, the patient has an excellent chance for cure; if the nodes are extensively involved the chance for cure is essentially nil.

It seems obvious that early treatment of the primary lesion and of the nodal areas is mandatory for successful management of this condition. Critics might state that if the nodes are not involved, there is no reason to remove them; that the cure rate would not be improved by node dissection. But one must keep in mind the highly malignant nature of melanoma, its almost total lack of cellular cohesiveness, and its infinite capacity for local invasion and lymphatic permeation. It seems probable, if not necessarily true, that occult lymphatic metastasis has occurred in every case of clinical melanoma. A pathological report of "nodes free of metastasis" may merely indicate that the few metastatic cells present have not been apprehended by the currently accepted laboratory methods of sampling such nodal tissue. Accepting this reasonable probability, a far more appropriate statement would appear to be this: If there is delay until the nodes appear to be clinically involved, nodal dissection is probably of little avail. This would indicate that every patient should have a regional node dissection as early as possible and before there is clinical evidence of metastasis in the suspect nodal area.

TABLE 8.—*Present Status of Patients with Reference to Nodes*

	Total Number	Free of Disease
Nodes negative	23	21
Single node positive	5*	2
Multiple nodes positive	20	3

*Including 1 dead, 2 lost to follow-up.

TABLE 9.—*Clinical Course After Completion of Treatment*

Remained free of disease	50
Lost	2
Recurrent disease between primary lesion and treated nodal area	3
Recurrent disease proximal to nodal area	1
Disseminated skin, or generalized metastasis	25
Total	81

Table 9 is a summary of the subsequent clinical course of the 81 cases regarded as definitive in this study. Fifty remain free of disease and two were lost to follow-up. In three cases recurrent disease developed between the treated primary lesion and the area of radical node dissection, and amputation of the extremity was carried out. In one patient recurrent disease developed immediately proximal to the treated nodal area (obviously the nodal dissection was done too late) and amputation would have been of no benefit. Disseminated disease developed in 25 cases, apparently primarily blood-borne, and cure probably was impossible because of the mode of metastasis. At present there is no way of forestalling or dealing with blood-borne metastasis from this disease. The status of the definitive group at the time of this report is set forth in Table 10. While 32 of the patients were free of disease for periods less than three years, 18 were free for periods of from three to more than ten years; two were lost to follow-up, but had been free of disease when last seen; three were alive but had melanoma and 26 had died of melanoma. Eight of these already had generalized metastasis when first seen, and while they could not be excluded from the definitive group they were hopeless from a therapeutic standpoint.

A careful analysis (Table 11) of failures following treatment was undertaken to see what might have been done to avoid the fatality. In retrospect,

TABLE 10.—*Present Status of Definitive Group*

No evidence of disease:	
1 year or less	19
2 years	13
3 years	3
3 to 5 years	6
5 to 10 years	7
10 years	2
Lost to follow-up (without disease when last seen)	2
Alive with melanoma	3
Dead of melanoma	26
Total	81

TABLE 11.—*Analysis of Failures Following Treatment*

More aggressive treatment probably would not have favorably influenced the course of the disease because:	
(a) Incurable when first seen	6
(b) Died of blood-borne metastasis	2
Unfavorable outcome probably might have been altered by:	
(a) Less delay in treatment of primary lesion	3
(b) More radical treatment of primary lesion	5
(c) Less delay in doing node dissection	9
(d) Amputation with node dissection	3

six of the patients were undoubtedly incurable when first seen; an additional two died of blood-borne metastasis which had already occurred at the time of definitive treatment. In other words, there were eight cases in which more aggressive treatment would not have helped. But retrospective analysis of 20 other failures suggests that much might have have been done to improve the outcome. Among these, three would undoubtedly have benefited by less delay in treatment of the primary lesions; five by a more radical management of the primary lesion; and in nine cases there was excessive delay of node dissections, which probably contributed to the failure in the treatment program. There were three cases in which primary amputation might have brought about cure but in which this chance for cure was probably lost because of a more conservative approach. In summary, eight of the failures were probably unavoidable, but 20 of the patients might very well have been saved had less delay intervened in treatment of the primary lesion, if the original focus had been treated more radically, and if there had been less delay in doing node dissection.

DISCUSSION

Some uninformed dermatologists, and others who seem unable to accept or understand the almost uniformly lethal nature of melanoma, may persist in cauterizing or otherwise inadequately and/or meddlesomely trifling with this neoplasm. Fortunately for the patient, this approach is increasingly falling into discard. It would seem safe to state that, among those who have any appreciation of the malignant potential of melanoma, there is uniform agreement that prompt and radical surgical excision of the primary lesion is in order. There would be considerably less unanimity in regard to management of the regional node problem. Yet the mounting evidence points in but one direction.

DeWeese[2] summarized the experience in a university hospital before 1948 where the practice had been to radically excise the primary lesion but to withhold node dissection until metastasis was clinically evident. He reported that only 7.9 per cent of patients so managed remained free of recurrence beyond the five-year period and concluded the poor results achieved by late dissection of clinically involved nodes made a more aggressive approach to the problem necessary. Lund and Ihnen,[4] reporting on a comparable group similarly managed, said that but one of 19 patients operated on after nodes were apparently involved survived five years. They conclude that "prophylactic" dissection should be done.

While the desirability of attacking melanoma radically by wide surgical excision and regional lymph node dissection was indicated as early as 1907 by Handley,[3] acceptance has been slow. Pack and associates[7] emphasized the application of the principle of excision of the primary lesion and dissection of nodes in anatomic continuity, citing decided increases in salvage where such operations were done. While this procedure represents the acme in surgical management of any form of cancer, too often it is not applicable to the management of melanoma, because of the anatomic location of the primary focus at a great distance from or equidistant between nodal groups. This has made the application of "discontinuous dissection" of the primary lesion and nodal areas necessary in many cases—that is, excision of the two areas in anatomic discontinuity, and sometimes with a lapse of time between dissections.

Some investigators suggested that a period should elapse between the surgical excision of the primary and the regional nodal dissection to permit "filtering out" by the nodes of transient cells in the lymphatics intervening between the primary and the nodal groups to be dissected. Suggestions as to the time that should be permitted have varied from six weeks in cases without palpable nodes[2] to from one to two weeks. While it is undoubtedly true that the metastatic cell will pursue a dilatory and lagging course to the regional nodes if these structures themselves and the afferent lymphatic channels are blocked by tumor, this is the situation where there is clinical evidence of metastatic involvement of the nodes. Indeed, repeated failures of lymph nodes blocked with tumor to collect colloidal isotopes introduced into areas drained by their afferent lymphatic channels suggests that particulate matter in lymphatic systems so involved may *never* reach the nodes. Additional evidence indicates that material passes quickly along unobstructed lymphatics and lodges in the regional node group in a matter of minutes, probably in much less time than is required to surgically ablate the primary site. Weinberg and Greaney[9] reported satisfactory impregnation of unblocked regional lymph nodes by injected supravital dyes in 15 minutes, and said that in 30 minutes successive echelons of nodes may be visualized by this technique. Because of the rapidity of this lymphatic transmission, there appears to be little validity in waiting for a prolonged "filtering out" period in the absence of clinical evidence of involvement; and if "dissection in continuity" cannot be achieved for anatomic reasons, it should at least be possible to effect the surgical management of such situations in continuity with reference to time even though not anatomically.

The five-year salvage rate (Taylor and Nathanson[8]) of but 2.6 per cent when there was nodal involvement at the time of surgical treatment is discouraging but significant. In contrast are reports of over-all five-year salvage rates of 38 per cent[1] and 40 per cent[6] when these more aggressive surgical approaches were employed. These are compelling reasons for the application of the principle of "prophylactic" node dissection for melanoma when possible.

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Use of the Artificial Kidney

Its Place in the Treatment of Acute Renal Failure

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• Of 57 patients with severe, but potentially reversible, acute renal failure who were observed during a recent four-year period, some had dialysis with an artificial kidney and some did not.

Twenty survived with the standard "conservative" management alone; 19 survived with a combination of "conservative" and "intensive" (that is, artificial kidney) treatment; 18 patients died.

One error that was made in the management of all 18 patients who died, was excessive delay in the use of the artificial kidney.

Hemodialysis should be used whenever serious electrolyte abnormality exists, whenever the blood urea nitrogen exceeds 150 mg. per 100 cc. or whenever clinical signs of uremia first appear. One or more of these indications will usually, but not always, become evident between the fifth and the eighth day of virtual anuria.

In RECENT YEARS there has been no major controversy or innovation concerning the "conservative" management of patients with acute renal failure; the treatment of such patients during the early stages of anuria-oliguria is now a matter of universal agreement.[3,5,7,9] It is all the more surprising to find widespread divergence of opinion regarding the more intensive modalities of treatment. While the therapeutic efficiency of the artificial kidney procedure is today widely recognized and the technique of using it has become routine in many centers, controversy about the indications for hemodialysis in individual cases is the most formidable remaining obstacle in the path toward standardized management of acute anuria. While some investigators[5] decline to publish their criteria for use of dialysis, others advocate dialysis as a routine to be employed on the fifth, sixth (3) or seventh (6) day of anuria; and still others would use it only in patients with blood urea nitrogen over 200 mg. per 100 cc.[2] The Swedish school which in the past restricted use of the artificial kidney to comatose uremic patients, intends to use it more extensively in the future. Kolff[4] is now guided by the clinical condition of the patient but has not published the particular clinical signs which he uses as signals in this respect. In earlier publications he advocated dialysis of patients with a serum potassium of 7.0 mEq. per liter or more, with carbon dioxide content of 12 mEq. per liter or less, with blood urea nitrogen of 150 mg. or more per 100 cc.

The present report concerns 57 patients with potentially reversible acute renal failure and no other associated fatal primary pathologic condition. Thirty-nine of the patients survived and eighteen died.

CLINICAL MATERIAL AND METHODS

The patients were dealt with in a four-year period ending early in 1958. In many instances I was not in charge of the clinical management and my services were confined to consultations or hemodialysis. In the case of the patients whose treatment I did manage, standard conservative measures were employed: Particular attention was directed to water balance (fluid intake usually restricted to the visible output plus 500 cc. per 24 hours), to electrolyte balance, to administration of a high caloric protein-free regimen and careful clinical and chemical supervision. Hemodialysis was performed with the portable Skeggs-Leonards machine at various hospitals in Southern California. Blood was usually withdrawn and administered via a double lumen catheter inserted into the inferior or superior vena cava by way of a saphenous or external jugular vein. Hemodialysis usually lasted about four hours and required 150 mg. of heparin in the average patient.

RESULTS

Itemized clinical data concerning 51 of the 57 cases presented here have been published elsewhere.[8]

1. Patients who recovered from acute renal failure without dialysis

Twenty patients recovered from acute renal failure without dialysis. Anuria-oliguria (urine output less than 500 cc. per day) continued, in this group, for from three to eleven days, the highest blood urea nitrogen was 195 mg. per 100 cc., the highest serum potassium 9.2 mEq. per liter. Severe neurological abnormality (coma) was present in three patients. Many patients had nausea and vomiting which precluded feedings by mouth or by indwelling gastric tube. Pulmonary edema or other signs of

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severe cardiac decompensation were observed in three patients. Peripheral edema was observed in six instances and was always associated with excessive administration of fluid.

2. Patients who recovered from acute renal failure with the aid of the artificial kidney

In 16 of this group of 19 patients the use of the artificial kidney was considered lifesaving by all physicians concerned. In the remaining three instances the treatment was considered helpful, but one or more physicians felt that the patients might have survived without it. Anuria-oliguria continued for from eight to thirty-nine days. Hemodialysis was used as early as the fifth day and as late as the twenty-third day after the onset of anuria. In four patients dialysis was done twice. The highest serum potassium was 10.2 mEq. per liter, the highest non-protein nitrogen content was 280 mg. per 100 cc., and the highest blood urea nitrogen 240 mg. per 100 cc. Apart from the chemical indications, clinical indications for dialysis were: Severe neurological abnormality (coma, convulsions, severe twitching) in eight cases; coexistence of neurological and circulatory abnormalities (usually pulmonary edema) in seven. Previous overhydration and other earlier deviations from standard management were corrected with hemodialysis in six instances. Severe electrolyte abnormality (usually acidosis or hyperkalemia) was the primary indication for hemodialysis in eight cases and clinical manifestations of uremia were the primary indications in eleven.

The effect of the artificial kidney procedure was attested by chemical determinations and by clinical changes. Abnormal blood electrolyte levels, including abnormal blood pH, were corrected in every instance. The amounts of urea removed from the patient and recovered in the dialysis fluid varied from 38 to 180 grams. Blood urea nitrogen levels and non-protein nitrogen decreased significantly in all cases, but the decreases did not always reflect the large amount of nitrogenous material recovered in the dialysis fluid. The average change of blood urea nitrogen was from 181 mg. per 100 cc. before dialysis to 73 mg. after; the maximum change was from 160 mg. to 35 mg.; the minimum change was from 92 mg. to 52 mg. In several patients who were overhydrated the use of the portable Skeggs-Leonards artificial kidney permitted removal of fluid by ultrafiltration. As much as 4,500 cc. of fluid was removed in this manner and this "ultrafiltration" effect was considered decisive for the patient's recovery in three instances.

The effect of the artificial kidney procedure on the clinical signs and symptoms in the surviving group of patients was striking. Improvement in the patients' nervous and mental states was noticeable at intervals of time which varied from 30 minutes after the start of the procedure to 24 hours after it was finished. Most patients rested quietly during the procedure and felt decidedly improved afterward—anxiety and restlessness disappeared, twitching usually diminished, awakening from coma and stupor was common. Confusion usually, but not always, gave way to full orientation and ratiocination. In three cases dialysis was carried out despite hemorrhagic phenomena; this condition did not appear to be aggravated by the artificial kidney procedure and it ceased shortly after dialysis was finished.

In the group of patients reported upon here, untoward incidents did not occur during dialysis. Fluctuations of the arterial pressure were observed during the procedure in about 50 per cent of the treated patients but could be readily controlled with small doses of pressor or depressor agents. Decreases of the arterial pressure usually occurred at the beginning of dialysis and were attributed to the rapid infusion of citrated priming blood; and rises of the arterial pressure were occasionally observed later during the dialysis. These fluctuations did not call for an interruption of the procedure. In one case refractory hypotension occurred during the dialysis. It was traced to the commercially available "anhydrous" calcium chloride, which contained more than 50 per cent water, and the dialysing solution made with it had caused hypocalcemia in the patient, who died nine days after the first dialysis.*

3. Patients with acute, reversible renal disease who might have survived with more appropriate therapy

When patients survive after an episode of acute renal failure it is not easy to take issue with the therapeutic management. On the other hand, the question must be posed: What went wrong when patients do not survive such episodes, when autopsy findings (available in the 18 cases reported here) show that the patients were suffering from potentially reversible lesions of the kidney and when death cannot be fairly ascribed to associated primary disease.

In the 18 patients with acute renal failure who died, death occurred as early as four days and as late as 21 days after the onset of virtual anuria. Three of the six "early" deaths (within seven days

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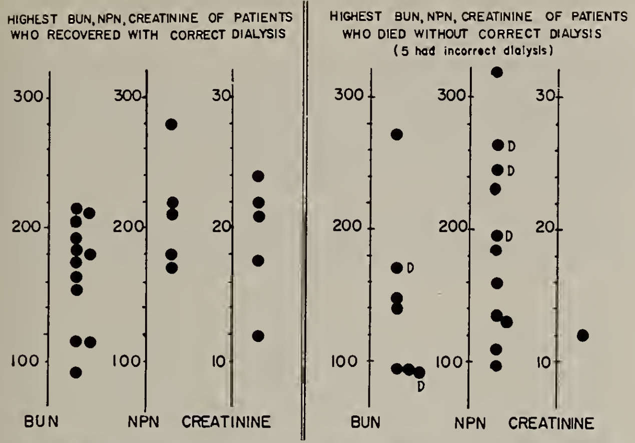
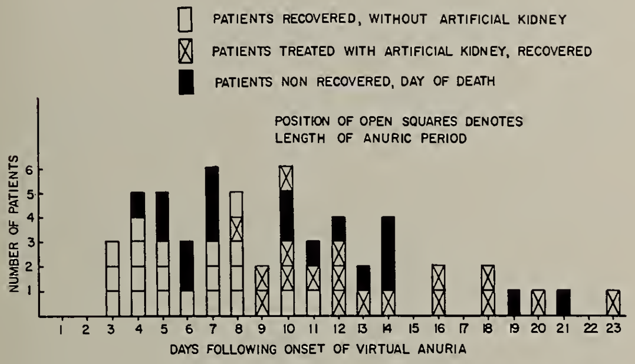
*It must be said, in all fairness, that death occurred in three other patients while they were undergoing dialysis; these patients are not included in the present series (no autopsy in two, chronic disease in one). One of the patients who died during dialysis was 78 years of age and died suddenly (perhaps of embolism or cerebrovascular accident) while having dialysis on the 18th day following repair of a large aneurysm of the abdominal aorta and subsequent anuria. The other two patients had severe polycystic kidney disease, were in severe cardiac failure, and had received digitalis bodies. It is assumed that digitalis toxicity supervened in these two because of changes in electrolyte patterns during dialysis. One of the latter two developed ventricular tachycardia before dialysis began. Digitalization must be considered a definite hazard in patients who are to have dialysis.



Abbreviations: BUN = Blood urea nitrogen; NPN = Nonprotein nitrogen. The letter "D" beside some of the dots indicates use of dialysis in desperation even though it could not be expected to benefit.

Chart 1.—Comparison of highest nonprotein nitrogen, blood urea nitrogen and creatinine of patients recovered with correct dialysis and of patients who died without correct dialysis. This chart should indicate that the patients who recovered with correct dialysis were fully as sick as the patients who did not recover.



In one case (not shown on chart) the patient was uremic but not anuric.

Chart 2.—Length of anuric period in patients who recovered with or without dialysis and in patients who did not recover. This chart indicates that death can occur early or late after the onset of anuria.

of onset of anuria) could be attributable to overhydration which had resulted in pulmonary edema. In four of the "early" deaths the serum potassium was elevated above 7.0 mEq. per liter. In one "early" death, unrecognized active rheumatic carditis coexisted with the acute uremia; in this patient dialysis was done once and probably should have been repeated. There is very little doubt that more timely use of the artificial kidney would have prolonged life—perhaps until they recovered—in the patients who died "early" with hyperkalemia or from overhydration. Of the 12 patients who died eight days or more after the onset of anuria, only two had serum potassium above 7.0 mEq. per liter. Overhydration was a factor in only one of these "late" deaths. In two instances in the "late" death group the artificial kidney was applied as a measure of desperation when patients with daily urine output of 1200 and of 1800 cc. developed pulmonary edema and coma 14 and 18 days after acute tubular necrosis due to transfusion reaction. The other "late" deaths occurred presumably because repeat dialysis was not performed in time, although it should have been since these patients had been helped by earlier dialysis. In three of the "late death" patients peritoneal lavage was performed by other physicians and the artificial kidney was not employed. Six of the "late death" patients were not treated with any form of dialysis. One patient, in whom twitching began as early as the fifth day of anuria, had excellent chemical results from dialysis on the ninth day, then died, still twitching, on the twelfth day of anuria, although the serum electrolyte pattern was not abnormal a few hours before death and in spite of non-protein nitrogen of only 142 mg. per 100 cc. on the day of death.

DISCUSSION

The observations here reported on a series of 57 patients with potentially reversible renal failure uncomplicated by other serious primary disease should permit conclusions concerning the most effective use of the artificial kidney. The clinical and chemical course of acute renal failure in the group of 18 patients who died closely resembled the pattern observed in the recovered group, except for the correct use of dialysis (Chart 1). Several patients in the nonrecovered group were subject to overhydration of mild to moderate degree and to other deviations from standard management. However, similar deviations of even more striking degree occurred in some cases in the recovered group, and therefore the unfavorable outcome in the 18 cases in which the patient died cannot be attributed entirely to nonstandard conservative treatment but must also be ascribed in part to excessive delay in the use of the artificial kidney.

It has been found that the uremic syndrome due to acute renal failure evolves in a fairly well defined pattern when the patient is managed according to standard principles. Such patients will frequently be asymptomatic or have only mild signs (nausea, abdominal distention) for periods ranging from five to twelve days. As the uremia becomes more intense, relatively slight nervous signs (reflex hyperactivity, restlessness, confusion, drowsiness) or circulatory signs (loud P_2, low diastolic pressure, expiratory wheezes) will appear. Death due to circulatory failure may occur within 24 hours, and usually within three or four days, of the first appearance of two or more of the clinical signs of uremia mentioned above.

In the present series there were 14 patients with hyperkalemia (serum potassium in excess of 7.0 mEq. per liter) (Table 1). Three of these patients

TABLE 1.—*Hyperkalemia as a Cause of Death*
(Serum potassium above 7.0 mEq. per liter)

Number of patients	14
Survived without dialysis	3
Survived with dialysis	5
Died, dialysis not used	6

TABLE 2.—*Patients with Anuria-Oliguria of Seven Days or Less*

Survived without dialysis	14
Survived with dialysis	0
Died without dialysis	6
Died with dialysis*	1

*Patient had acute rheumatic carditis as well as acute renal failure.

TABLE 3.—*Patients with Anuria-Oliguria Eight Days or More*

Survived without dialysis	6
Survived with dialysis (1 patient with acute uremia, without oliguria)	19
Died without dialysis*	11
Died with correctly employed dialysis	0

*Dialysis was used as a measure of desperation or otherwise incorrectly in five of these cases.

TABLE 4.—*Probable Mechanism of Death in Patients Who Died from Acute, Reversible Renal Failure*

Death occuring on or before 7th day of oliguria:	
Hyperkalemia	3
Overhydration	3
Failure to use artificial kidney in time	6
Death occurring on or after 8th day of oliguria:	
Overhydration	1
Electrolyte abnormality (potassium, pH)	2
Coma, convulsions	8
Tachycardia, pulmonary edema	6
Failure to use artificial kidney in time	12

TABLE 5.—*Indications for the Use of the Artificial Kidney*

I. Chemical indications:
   (a) Serum potassium 7.0 mEq. per liter or more.
   (b) Rapidly mounting serum potassium.
   (c) Carbon dioxide 12. mEq. per liter or less.
   (d) Blood urea nitrogen 150 mg. per 100 cc. or nonprotein nitrogen 200 mg. per 100 cc.
II. Existence of two or more of the early clinical signs of uremia (reflex hyperactivity, restlessness, confusion, drowsiness, loud P_2, low diastolic pressure, expiratory wheezes).
III. If, after dialysis, the above indications recur, dialysis should be repeated in compliance with the above indications, even though diuresis may already have set in.

survived with "conservative" management, five survived with a combination of "conservative" and artificial kidney treatment, and six died. Of the six hyperkalemic patients who did not survive, none had the benefit of timely artificial kidney therapy. Hyperkalemia must therefore be considered as an indication for hemodialysis even though it is possible that some patients with a high serum potassium may recover without the use of the artificial kidney.

In the present series death from acute renal failure occurred as early as the fourth day and as late as the twenty-first day after the onset of virtual anuria (Chart 2). During the later stages of acute renal failure, when the serum electrolytes may be normal and diuresis may already have set in, death may still occur and can be preceded by only a short premonitory period during which signs and symptoms of uremia are observable (Tables 2, 3 and 4). Although patients in the terminal stage of uremia (coma, convulsion, pulmonary edema) have often been rescued by the artificial kidney, it is now agreed that hemodialysis should be employed earlier, not only because it prevents the development of irreversible complications, but also because the fatal progress of the disease is often too rapid to permit the start of intensive treatment when there has been excessive delay. Although 14 patients survived periods of anuria of seven days or less without dialysis, six patients died during the first seven days of anuria when their lives presumably could have been saved by the artificial kidney treatment. Although six patients survived more prolonged anuria without dialysis, and 19 survived with dialysis, eleven such patients died because they either did not receive dialysis treatment or received it only as a measure of desperation.

Ideally, therefore, the proper indications for artificial kidney treatment are as shown in Table 5. These indications require repeated daily reevaluation of the patient. Physicians who seldom see a patient with acute anuria will find it difficult to supervise anuric patients carefully enough. It has therefore been recommended that the first dialysis of anuric patients should be considered on the fifth or sixth day of anuria.[4] If the 57 patients described here had been managed according to this rule, most of the 18 patients who died would have had hemodialysis in time and would probably have survived, whereas only six patients in the series would have been treated with the artificial kidney without need.

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Trichomonal Vaginitis

The Problem of Chronic or Recurring Infection

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• In general practice and in gynecology, vaginal trichomoniasis is a frequent and troublesome problem. However, the trichomonas vaginalis organism is frequently found in an apparently healthy vagina, indicating that symptoms, recurrences, or exacerbations may depend on local changes in secretions, probably due in part to emotional stress. Therapy must, therefore, include not only the topical use of an effective trichomonacidal drug, but also sympathetic and considerate listening by the physician.

The combination of furazolidone and nifuroxime in vaginal suppositories and vaginal insufflation powder was found to be an effective trichomonacidal compound. A total of 56 patients with trichomonal, monilial and nonspecific bacterial vaginitis was treated with this nitrofuran combination with good results.

In topical therapy, powders seem more effective, probably because a dry environment is unfavorable to the flagellates. The patient should be instructed to insert two vaginal suppositories daily for the first week, then to decrease the dosage gradually as indicated by the physician after clinical examination and microscopic examination of vaginal secretions each week. Of great importance is the fact that some patients may need long-term maintenance therapy—one or two suppositories weekly—especially if the emotional difficulties appear to be insurmountable.

As TO THE DIFFICULTY of dealing with it, trichomonal vaginitis is to the gynecologist what low back pain is to the orthopedist or headache to the internist, except that in the gynecologic syndrome, objective findings are always present. In this review, we shall present a practical plan for dealing with patients with chronic trichomonal vaginitis, and report our experiences with a new drug which we have been evaluating.

The very number of topical preparations available for the treatment of trichomonal vaginitis suggests that there is no absolute cure in some cases. The unpredictability of response to topical treatment led to widespread hopes that a solution to the problem would come in the form of a potent trichomonacidal drug to be given orally. However, results of recent studies with Tritheon® (aminitrozole), the only oral medication available in the United States, have been uniformly discouraging[1,2,4,7,10] while the newly developed Japanese antibiotic *trichomycin*, despite high *in vitro* anti-trichomonal properties ascribed to it, proved similarly ineffective when given orally in at least one controlled clinical study.[2] Until an effective systemic drug is developed, gynecologists must outline for themselves an effective plan for controlling the symptoms of this troublesome disease.

Local therapy of trichomonal vaginitis is important, but it is only one facet of treatment. Trichomonal vaginitis probably develops from a combination of factors. Obviously, the organisms must be present, but in addition, psychosomatic factors appear to be instrumental in bringing about a suitable environment for proliferation of the organism.

The very presence of the parasite poses intriguing questions. Incidental to a plan for early detection of uterine cancer in which we have examined many thousands of specimens of vaginal exudate, we have noted innumerable cases of unsuspected trichomonal infestation of the vagina.

DIAGNOSIS

Virtually any physician will instantly recognize severe trichomonal vaginitis with its heavy, frothy discharge and petechiae in the vaginal vault. However, milder cases of vaginal trichomoniasis may be more difficult to diagnose. It is wise to take fresh specimens of vaginal exudate from all patients before any gynecologic examination. With the patient prepared for vaginal examination, but before introduction of a glove or speculum, a glass tube is inserted into the posterior fornix and secretions are aspirated, sprayed on a slide and diluted with warm saline solution. The slide is immediately examined for motile trichomonads. If this regimen is followed, the organism is rarely overlooked. Palmer and Robert of France found this examination somewhat easier to do if the saline solution contains 1 per cent cresyl blue solution, which stains dead leukocytes violet but leaves the trichomonads and the few living polymorphonuclear leukocytes unstained. The continued motility of the flagellate then permits easy identification. Although this technique is valuable

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for diagnosing vaginal trichomoniasis, various other stains and cultures are useful as criteria of cure and as an aid to diagnosis of extravaginal foci of infection. The Papanicolaou staining method, when incidental to cytologic screening, is also useful to detect trichomonal infection.

METHOD OF THERAPY

For effective local therapy, the following are significant factors:

1. Drying is extremely important. Any agent which will separate the opposing vaginal surfaces and possibly keep the vagina dry is of some value.
2. Local therapy must be considered for a considerable time.
3. It is wise to consider the trichomonad as a "normal" vaginal saprophyte which may be present without signs or symptoms.

We have recently undertaken a study using furazolidone-nifuroxime,* a new drug combination which appears to be effective for the control of this disease. The chemical formula is N-(5-nitro-2-furfurylidene)-3-amino-2-oxazolidone combined with anti 5-nitro-2-furaldoxime. The methods used in the study are as follows:

Local Therapy. At the time of the first visit, the vagina is irrigated with a dilute solution of a mild detergent. The area around the urethral meatus is also cleaned, and the vagina then thoroughly dried. Insufflation of the vagina and the surrounding area with a fine-mesh trichomonacidal powder follows.

The patient is instructed to insert a suppository high into the vagina each morning and night. Suppositories appear to be more effective than vaginal creams. Furazolidone-nifuroxime vaginal suppositories have been employed recently with satisfactory results. An incidental problem at this stage of therapy is that the patients may occasionally complain that the suppository slips out of the vagina after the morning application; therefore, it is advisable to suggest the use of a perineal pad.

The patient is instructed to use the medication for six days, then suspend treatment for 24 hours before coming in for a second examination. If there are no trichomonads present in the vaginal exudate taken at this time, insufflation is repeated, and the suppositories reduced to one daily. If the flagellates are still present, however, the use of two suppositories daily is continued. If the exudate contains no trichomonads at the time of the third weekly visit, the dose is kept at one suppository daily through the next menstrual period; if it does contain the organism, two daily during the following menstrual period and one daily for three to five days following the menstrual period. The patient is then examined in the office, after not having used the medication for 72 hours. If the exudate is clear of trichomonads at that time, the use of suppositories is reduced to one every other day, then increased to one daily during the following menstrual period and for three days thereafter. If the exudate remains clear after the second menstrual period, a further reduction is made to one suppository every three days and one daily during the third menstrual period. If the vaginal exudate remains entirely clear of trichomonads after this period, use of drugs is discontinued and the patient is examined at intervals thereafter.

Douches are not advocated during treatment, but if the patient wishes to douche, we recommend that the solution used be acid; four tablespoonfuls of plain white vinegar to a quart of water is suggested. Some patients may feel a necessity to douche every morning even though not taking the medication at the time. This we have permitted on occasion.

Prevention of Reinfection. With this regimen, a certain number of patients are cleared of the infection and remain asymptomatic. However, some will have recurrence and in such instances we feel it is essential that the sexual partner be examined by prostatic massage. It is also wise to investigate other sources of possible reinfection—the bladder, urethra, Skene's glands, and the glands about the vagina—by careful examination of the secretions from these areas. Some patients with a history of frequent recurrence or repeated exacerbations, despite adequate treatment, and with no apparent outside source of reinfection, may have to continue use of small doses of the trichomonacidal drug. In such cases, we try to ascertain the longest interval possible between the use of suppositories without the development of recurrence. Frequently one suppository weekly is needed, and occasionally two. This therapy is supplemented by unobtrusive emotional support at each office visit, as required in individual cases.

The vehicle of the trichomonacidal substance used in vaginal therapy is quite important. We thought that the ideal base would be a cream having hygroscopic properties and a pH of 4 to 5 because a cream should spread more evenly over the mucous membranes than would a dissolved suppository or an insufflated powder. To our surprise, the powder appeared to be a more effective agent and the suppository the next best. This is probably due to the fact that trichomonads survive poorly in a dry environment. The drug may lose some of its effectiveness in the moist environment created by using a cream. Accordingly, the best plan we have found is to use effective suppositories, combined with the insufflations as necessary. Insufflations should be done only by a physician.

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*Tricofuron Improved—Eaton Laboratories, Norwich, New York.

Emotional Factors. It appears that many women who have trichomonal vaginitis, and especially those with frequent recurrences or exacerbations, have various tensions underlying their condition. Furthermore, rapid improvement was often noted in patients who were able to find some emotional support or derive reassurance from their office visits. A notable contrast was seen between patients who could be so assisted and those who could not, although both groups were treated with the same techniques and drugs. A few brief reports of cases serve to illustrate this point:

CASE 1. A recently divorced woman with trichomonas vaginitis complained of being tired, chilly and nervous and of having difficulty sleeping at night. She had no children. For her to be comfortable, it was necessary for her to use a small maintenance dose of trichomonacide. Eventually she remarried; shortly before she did so, she discontinued use of the drug and thereafter did not need it.

CASE 2. A woman 38 years of age began to lose her hair in large amounts during the postpartum period of her first pregnancy and because of this became frantic with apprehension. Severe trichomonal vaginitis developed; it would not clear, but the patient was free of symptoms on a maintenance dose. Later, when the loss of hair ceased, the vaginitis cleared and no further use of the drug was necessary.

CASE 3. A twice-married, 29-year-old woman, gravida II, para II, who had transient hypertension and spastic colon, developed vaginitis during the early years of her children's lives when she was somewhat confined to her home and the neighborhood. Upon psychiatric consultation she readjusted to some of the disturbances in her life and the vaginitis cleared.

CASE 4. A woman 38 years of age, previously examined and treated for infertility, had been troubled with frequent recurrences of trichomonal vaginitis. She had various differences with her husband and took a vacation in Hawaii without him. During the vacation she remained free of clinical signs of the infestation, but they recurred with great severity shortly after her return home. Thereafter she remained free of symptoms while using a maintenance dose of the trichomonacidal drug.

In our clinical observations there were a number of instances to indicate that something more intangible than chemotherapy was of great value in helping the patients to gain freedom from their disease. If patients with various tensions are more likely to suffer from trichomonal vaginitis, how might this be so? A change in vaginal pH is probably an important factor. Such a change may well be due to an increase in the total amount of secretions from the cervix and the various glands in and about the vagina. Some change in temperature may also contribute, possibly associated with vascular engorgement. Certainly exacerbations are more common in the second half of the menstrual cycle, when the basal body temperature is higher. On the other hand, the change may be one of variances in composition of the vaginal secretions themselves.

Greenhill and Mascall[7] expressed belief that the various chemical compounds now available undoubtedly cure some patients permanently and many more for varying periods; but, for the most part, recurrences are common in trichomonal vaginitis. Moore and Simpson[8] said that there are pronounced emotional components in this disease. Many patients with trichomonal vaginitis have transitory emotional or psychic difficulties. When these disturbances recede, the vaginal infection often abates.

Although as gynecologists we recognize that any psychotherapy we are able to provide is superficial at best, our psychiatric colleagues suggest that we are in a good condition to provide such assistance to our patients. All patients in this series were given ample opportunity to talk about their problems. The mere fact that the patients have a sympathetic listener in their gynecologist may permit them to express various fears, which may be on a sexual, domestic or social level. Reassurance and considerate listening very often provide major therapy for these patients. At the same time, of course, the chemical therapy carried out provides immediate relief and further reassurance. With individual attention of this kind, recurrences may be less frequent.

RESULTS

The clinical trial of any new drug in other than a double-blind experiment involves responses on the part of the patients and the physician which influence the evaluation of the results. In the course of evaluating a new trichomonacide, we have standardized our drug therapy and have individualized our patient care to the detriment of any single drug evaluation, but to the advantage of understanding the natural history of trichomonal vaginitis.

The active ingredients used in the product* used in the clinical trials here reported are Furoxone, a brand of furazolidone, whose chemical formula is N-(5-nitro-2-furfurylidene)-3-amino-2-oxazolidone, combined with Micofur, a brand of nifuroxime, the formula of which is anti 5-nitro-2-furaldoxime. These have been pharmaceutically compounded into vaginal suppositories and vaginal insufflation powder which are available on prescription. These compounds belong to the synthetic nitrofurans, whose antimicrobial properties have in recent years proved highly effective in a number of clinical specialties.[5] The related nitrofuran Furadantin (nitrofuratoin, 5-nitro-2-furfurylidene-aminohydantoin) has been orally effective in both sexes when treating some cases of urinary trichomoniasis.[3,6,9] Although we have had no extensive clinical experience with it, Furazolidone is supposedly both trichomonacidal and bactericidal at low concentrations *in vitro*. Because many patients with vaginal trichomoniasis had Candida (Monilia) albicans as well, an antifungal nifuroxime was added with the combination of nitrofurans in the compound.

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*Tricofuron Improved—Eaton Laboratories, Norwich, New York.

Vaginitis in 56 new patients was treated with this new nitrofuran combination. Of the 56, 42 had trichomonal vaginitis. Thirty-seven of the patients with trichomonal vaginitis were observed for more than four months. All 37 had vaginal discharge of secretions, itching or irritation. The presence of trichomonads was proven by microscopic examination of specimens. All the patients were examined weekly. On completion of therapy, all but four were cleared of trichomonads in vaginal exudate, and all but one were free of symptoms.

At the end of one month of treatment, all but six were cleared of the organism and all but one were cleared of the symptoms. After three months of therapy, the 33 patients who were free of the organism and symptoms stopped using the compound. At four months 18 remained clear after going without therapy for one month. Patients with recurrence of symptoms were given a maintenance dose of the trichomonacide, and all but one of them remained clear of symptoms on this regimen. Five patients were not clear of organisms for any significant period.

Although we included no controls in this series, other clinicians who have followed a fairly similar regimen compared results with those in a group using placebo suppositories. Rarely did patients receiving only placebos and using vinegar douches have relief of symptoms.[9]

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—From the Department of Public Relations, American Medical Association

Systemic Lupus Erythematosus

Results of Treatment with Triamcinolone

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• Twenty-nine patients with systemic lupus erythematosus were treated with a new synthetic unsaturated prednisolone derivative, triamcinolone, for as long as 11 months. This hormone is 1.3 times as powerful as prednisone and 4.4 times more potent than hydrocortisone as an anti-inflammatory agent. The average dose for beginning therapy in cases of mild systemic lupus erythematosus was 20.6 mg. a day. The average maintenance dose used to control mild exacerbations of the disease was 26.0 mg. a day. There was no evidence of sodium retention or potassium loss.

Sixteen patients had upper gastrointestinal x-ray studies before and during therapy with triamcinolone. There was no evidence of peptic ulceration except in one patient who was receiving 96 mg. a day. Nine patients had gastric analysis with histamine before and during therapy. No significant changes were noted in results of these tests, even in the patient who had an ulcer. No abnormal increase in uropepsin was noted in cases in which this factor was tested.

The pattern of clinical improvement closely paralleled that obtained by previous treatment with older steroids. There was a disappearance of all the clinical and laboratory abnormalities produced by the disease, with the exception of long standing renal involvement. A major difference between triamcinolone and other steroids was a tendency to progressive gradual loss of weight, partly owing to fluid loss. Cushingoid appearance produced by other steroid therapy did not disappear.

The cutaneous side effects, particularly Cushingoid appearance, hirsutism and striae were more pronounced than with older steroids. The most serious side effect was muscle weakness which appeared in six patients, all women, in from four to thirty-two weeks after starting triamcinolone. The profound muscle weakness, most pronounced in the quadriceps group, gradually cleared after several weeks of therapy with another steroid.

Fourteen patients had received prior steroid therapy with all the older anti-inflammatory hormones and seven of them were better controlled and felt better with triamcinolone.

THE PROBLEMS OF THERAPY in systemic lupus erythematosus have been under study at the Los Angeles County General Hospital for some eight years. During that time 275 patients with various forms of the disease have been treated with salicylates, antimalarial drugs and steroids.[5,6,7]

For the 11 months preceding the preparation of this report the author had opportunity to study a group of 29 patients with systemic lupus erythematosus requiring steroid therapy who were being treated with a new synthetic fluorinated, unsaturated anti-inflammatory hormone, triamcinolone (Aristocort®). Chemically, this substance is 9 alpha fluoro —16 alpha hydroxy-delta one hydrocortisone.[1,2] The purposes of this report are two: One is to review our experiences with this new agent and compare the results to that produced by older steroids, and the other is to present the data obtained from routine gastrointestinal roentgenograms, gastric analysis, and 24-hour urinary uropepsin determinations before and during treatment with this new steroid in order to assay its ulcerogenic tendency and effects on gastric secretions.

Chemical Configuration

Chart 1 illustrates the structure of triamcinolone alcohol compared to that of some of the older steroids. During the earlier part of the study the diacetate ester was utilized (acetate radical on carbons 16 and 21). The structure of the alcoholic form is similar to that of prednisolone with the addition of a fluorine atom at the 9 alpha position and a hydroxyl group at the 16 alpha position (see Chart 1). Fluorination greatly increases both the mineral corticoid and glucocorticoid effects of all steroids; however, the salt-retaining effect is relatively much more increased. With the addition of a hydroxyl group at carbon 16 there is again elimination of the sodium-retaining effect of fluorination without much loss of the increased anti-inflammatory potency.[1,2]

Clinical Material

Twenty-nine patients with active systemic lupus erythematosus were treated. The diagnosis was

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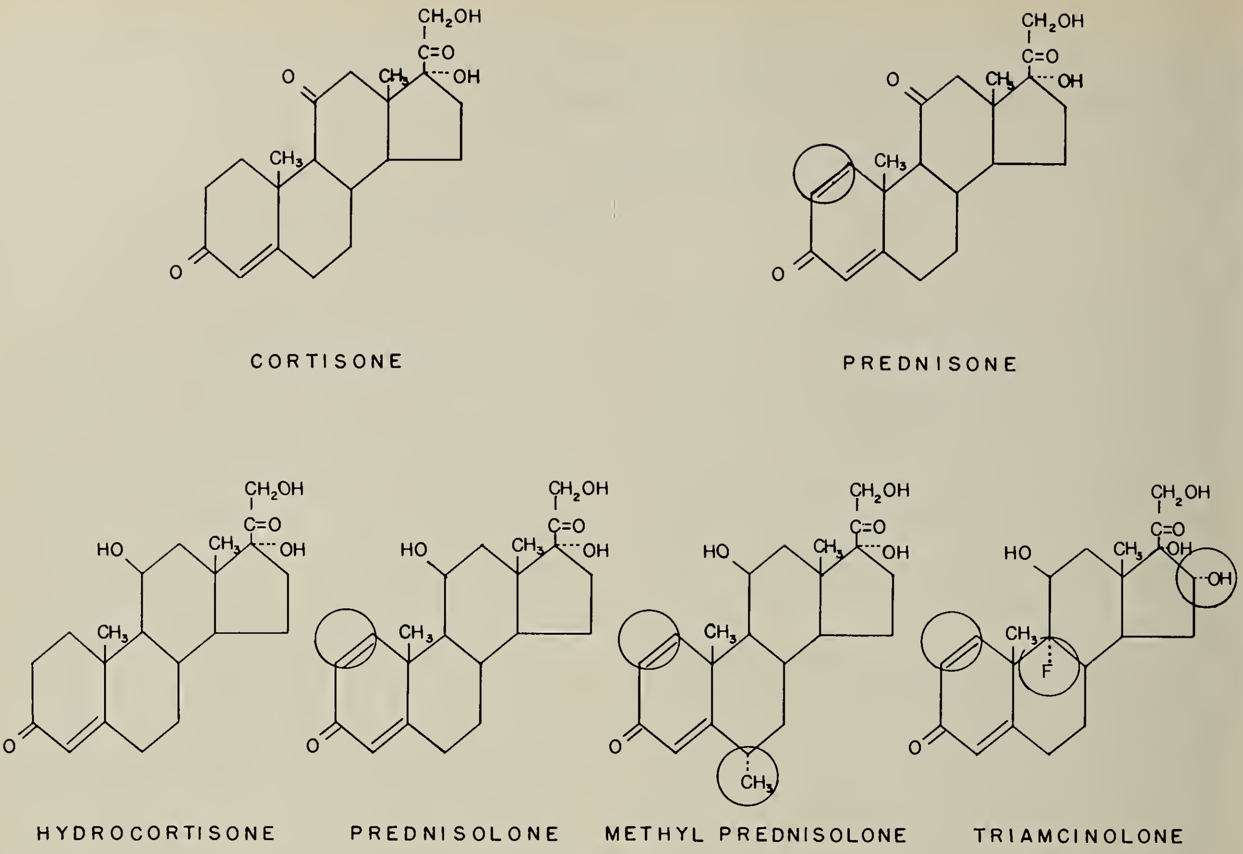

CORTISONE PREDNISONE

HYDROCORTISONE PREDNISOLONE METHYL PREDNISOLONE TRIAMCINOLONE

Chart 1.—Configuration of triamcinolone as compared with some of the older steroids.

proven by the observation of L.E. cells in 25 cases, by clinical features and skin biopsy in three cases, and was made on the basis of clinical features alone in one case. There were 22 females and seven males (see Table 1). The average duration of illness from the time of onset of disease to the time of the writing of this paper was 92 months. Four patients were well stabilized by administration of steroids at the time of transfer to triamcinolone and 14 were having exacerbation of varying severity. Eleven patients had active disease and had not recently received other steroidal therapy. The average age of these patients at the time of treatment was 33.7 years with a median of 32.0 years. The average age at which illness had begun was 26.0 years. The mean duration of total hormone therapy including triamcinolone was 28.2 months and the median was identical. The duration of treatment with triamcinolone averaged 4.3 months with a median of four months and a range of four days to a maximum of 10.5 months in two patients. The total experience was 125.2 patient-months of therapy (see Table 2).

Principles of Steroid Therapy

Once the diagnosis of systemic lupus erythematosus is made, the type of treatment instituted depends entirely on the clinical severity of the illness. If the presence of the disease becomes known as a result of a false-positive serologic test for syphilis in an asymptomatic patient who has perhaps a few L.E. cells, then no therapy is necessary other than close observation of the patient. If the main complaint is mild rheumatoid arthritis or rheumatic fever-like symptoms, this often can adequately be controlled by modified bed rest and salicylates, which should be increased to the point of salicylism. The frequent use of these drugs should be encouraged since they reduce the requirements for anti-malarial drugs and steroids. None of the patients studied had allergic reaction to them. Increased bed rest, in addition to other treatment, is usually helpful in controlling symptoms in the active stages of the disease. If salicylates and rest fail, or if cutaneous lesions are present, then anti-malarial therapy should be instituted.[5] When both these measures are

TABLE 1.—*Clinical Material (29 Cases)*

	Number	Per Cent
Males	7	29
Females	22	76
Diagnosis originally confirmed by:		
L.E. cells	25	86
Clinical pictures and biopsy	3	11
Clinical picture alone	1	3

TABLE 2.—*Clinical Data on the 29 Cases of S.L.E. Treated With Triamcinolone*

	Range	Median	Mean
Age in years (at time of therapy)	11-57	32.0	33.7
Duration of disease in months to time of writing	6-240	78	92
Duration of all steroid treatment including triamcinolone (months)	1-80	27.0	28.2
Triamcinolone therapy (months)*	0.2-10.5	4.0	4.3
Dosages (mg. per day):			
Initial treatment (11 cases)	4-40	18	20.6
Maintenance (26 cases)†	8-96	18	26.0
Triamcinolone therapeutic ratio‡:			
×hydrocortisone (9 cases)	1.0-7.5	4.5	4.4
×prednisone (5 cases)	0.75-3.3	1.2	1.3
×prednisolone (1 case)	1.0	......	......
×cortisone (1 case)	3.1	......	......

*Total patient-months of therapy was 125.2.

†The majority of these patients had active S.L.E. not well controlled by other steroids at the time of transfer to triamcinolone. This explains the larger maintenance doses. Most of the patients initially treated with triamcinolone did not require large doses of anti-inflammatory hormones.

‡Therapeutic ratio=Amount of drug required to produce equal anti-inflammatory effects on a milligram for milligram basis. This is determined by dividing the amount of triamcinolone required for maintenance into the amount of older steroids. In order to ascertain the dosage of triamcinolone to use in transferring from another steroid, divide the therapeutic ratio into one: for example, with hydrocortisone the therapeutic ratio is 4.4, then the factor is 1÷4.4=0.23 (or 23% of) the dose of hydrocortisone.

inadequate, or if the patient either is critically ill or has neurological or renal involvement, steroid treatment should be started.

The principles involved in using triamcinolone are identical with those used in therapy with older agents.[5,6,7] If there is no clinical improvement, (which is best judged by the temperature response in the acute cases in 24 to 48 hours) then the dose of steroids should be increased by amounts of 25 to 100 per cent, depending upon the urgency of the situation, until therapeutic response occurs. As much as 3,500 mg. of cortisone per day has been used in treating an acute exacerbation of lupus with a successful outcome. There are no fixed limits of the dosage required to produce remissions; however, in several cases in which there was no clinical response after several days' treatment with 3,500 mg. of cortisone per day (or the equivalent in other steroids) increasing the dose beyond this point did not help and the patients died.

It is no longer necessary with the newer unsaturated steroids to routinely induce overt Cushingoid changes in the first 14 days of treatment.[7] If neurological disease due to vascular systemic lupus erythematosus is present, much larger doses should be used and a Cushingoid appearance induced as quickly as possible in order to block progression of this change and initiate healing, which usually occurs.

Once the patient is afebrile and the symptoms controlled, the amount of medication must not be reduced until there is general improvement in the laboratory changes as well as the clinical picture of the patient. It is advisable to continue high dosages of steroids until all the abnormal physical findings, such as pleural effusion, pericarditis with effusion and other active evidences of inflammation, subside. Advanced renal disease is the one exception; it will not be benefited by continued use of large amounts of these hormones. Acute toxic nephritis with elevation of the nonprotein nitrogen to approximately 100 mg. per 100 cc. will usually benefit from steroids, particularly if hypertension is absent. The nephrotic syndrome due to systemic lupus erythematosus will often improve. If there is no improvement in the renal lesions after two months of adequate steroid therapy with production of a Cushing state, then other modes of treatment such as nitrogen mustard must be considered.[5]

When the hemoglobin level has become almost normal and the abnormal physical features have disappeared, the steroid dose is reduced by decrements of about 10 per cent. There should be a waiting period of four to seven days or longer to observe signs of relapse. Mild exacerbations with slight return of symptoms often appear within 24 hours—the so-called rebound phenomenon. This subsides spontaneously in a few days without increase in dosage if the amount of steroid being given has not been reduced below the critical maintenance level, permitting real relapse to occur.

The clinical condition and the hemoglobin content are used as the major guides to steroid therapy. If significant renal involvement is present, this condition is closely watched in order to determine when to reduce the dose. The sedimentation rate is never used as the main index to dosage, since it can remain indefinitely accelerated in some patients despite complete clinical remissions in which no steroid administration is necessary. The L.E. cell test is helpful in gauging the overall progress of the disease but should not be used as a basis to determine therapy since it requires several weeks for changes to occur, and many patients have persistently positive L.E. cell tests even when the disease is in remission requiring no medication.

Dosage

The amount of steroid required varied entirely with the severity of the disease and the sensitivity of the patient to the therapeutic agent.[5,6,7] In the case of the 11 patients who had received no previous therapy, attempt was made to estimate from past experience what the initial dosage ought to be. In making the estimate we assumed, from animal experiment and previous human studies, that the potency of triamcinolone was a little greater than that of prednisolone or prednisone.[4] The starting doses in these cases varied, from the addition of 4 mg. per day to the therapeutic regimen of a 19-year-old boy with mild arthritis which was poorly controlled by salicylates and anti-malarial drugs, to a maximum of 40 mg. per day in three patients with very active disease and multisystem involvement. The estimation of dosages in nine of the eleven cases on the basis of clinical experience and severity of the illness was correct and required little modification for control of the exacerbations.

Five patients who had been taking prednisone were changed to triamcinolone. The dosage required for the same clinical effect was four-fifths the amount of prednisone; in other words, the new steroid had a therapeutic potency 1.3 times that of prednisone on a milligram basis. The range varied from being 0.75 times as potent as prednisone to being 3.3 times as powerful (see Table 2).

Nine patients with varying degrees of control of the disease while taking hydrocortisone were changed to triamcinolone. The amount of the new steroid for equivalent maintenance was 0.23 times the dosage of hydrocortisone, or, conversely, the potency of triamcinolone was 4.4 times that of hydrocortisone on a milligram basis. The range in individual cases varied from 1.0 to 7.5 times as potent.

One patient was changed from prednisolone, 20 mg. per day, to triamcinolone, 20 mg. per day, with equally good control. In another case a severe exacerbation of the disease prevented a determination of dosage equivalents. An additional patient was changed from cortisone, 50 mg. a day to triamcinolone, 16 mg. a day, with good control.

Ten patients during the course of treatment were changed from triamcinolone acetate to the alcohol without any difference being noted in the clinical effects. Theoretically, the alcohol is a 17 per cent smaller molecule and should have been slightly more potent on a milligram basis.

Adjuvant Therapy

All patients were permitted a normal intake of salt except four who had a problem with excessive edema due to renal involvement. They were placed on a 200 mg. sodium diet. Except for one patient in whom a trace of ankle edema developed during triamcinolone therapy, there was no evidence of sodium retention. Supplementary potassium was not given. Low serum potassium was not detected even in patients receiving a maximum dosage of 96 mg. a day.

A routine regimen of prophylaxis against gastric ulcer, such as is usually recommended for patients taking over 50 mg. of cortisone per day or its equivalent, was not used in the present series except when indicated.[5,6] An "ulcer diet" and administration of anticholinergic drugs were continued in two patients who had recent history of duodenal ulcer. Two other patients who had epigastric distress from other steroids were also on a similar diet. Gastrointestinal roentgen series, uropepsin concentrations and gastric analyses in these patients remained normal. Three additional patients received anticholinergic drugs (but were not given an ulcer diet) because of epigastric distress following steroid therapy. The previously mentioned gastrointestinal studies on these patients were normal and remained so.

Gastrointestinal Studies

Sixteen patients had upper gastrointestinal x-ray examination before and every one or two months while under treatment. The dose of triamcinolone in these cases varied from 4 mg. a day to as much as 96 mg. a day. One patient was known to have an active duodenal ulcer, proven roentgenographically, before triamcinolone therapy. The patient followed an "ulcer regimen" while taking the new steroid and the lesion healed. In one patient who was not following a regimen for prophylaxis against ulcer, an acute superficial duodenal ulcer developed, with gross bright red blood in the stool, during a three weeks period of administration of 96 mg. of triamcinolone daily. This occurred during the sixth month of high dosage steroid therapy. Without reducing the dose of triamcinolone, vigorous ulcer regimen was carried out and the lesion healed. Because of a lack of general improvement despite a Cushingoid appearance, a month after the bleeding episode a change was made to 6a-methyl prednisolone, 96 mg. a day, and anticholinergic drugs were discontinued. Ten days later a similar bleeding episode occurred; it abated upon reinstitution of anticholinergic therapy and reduction of the dose of 6a-methyl prednisolone. Two weeks later the patient died and at autopsy evidence of disseminated cryptococcus was observed, as well as changes of systemic lupus erythematosus. No evidence of gastrointestinal ulceration was found at post-mortem examination. In the other cases no abnormalities were noted roentgenographically during the course of treatment with the new steroid. Bunim[3] reported a 22 per cent incidence of new peptic ulcers in patients who were similarly treated with prednisteroids and were not following an ulcer prophylaxis regimen.

Gastric analysis was done in nine patients before and every two months during treatment with triamcinolone. Free and total acidity were determined before and after subcutaneous injection of histamine phosphate, 0.1 mg. per 10 kg. of body weight. Specimens were drawn every 10 minutes after administration of histamine for a total of 40 minutes. No significant changes were noted in any of the patients, including the one who had a proven duodenal ulcer which was healing under therapy and the patient in whom an acute ulcer developed.

Twenty-four-hour uropepsin determinations were performed by the method of West in which the normal range is 15 to 40 units per hour.[14] Gray and co-workers[9] and Spiro[13] observed that excretion of uropepsin is increased with steroid or corticotropin (ACTH) therapy but other investigators[12] did not confirm this finding. Thirteen patients who received triamcinolone were studied as to uropepsin excretion before and every few months during therapy. No significant changes were noted in any of them, including the one in whom an acute ulcer developed. Results were all within the normal range throughout the study in seven patients. In three patients, including one who received 32 mg. a day for five months, uropepsin excretion was below the normal range before and throughout steroid therapy. In three patients, including the one with healing peptic ulcer, it rose from subnormal to normal levels during therapy.

Results of Therapy

The pattern of clinical improvement closely paralleled that obtained in systemic lupus erythematosus by previous treatment with corticotropin and the other anti-inflammatory hormones. The fever abated in 24 to 48 hours, joint pains disappeared in several days and pleural effusion and cutaneous lesions subsided in one to two weeks. Retinal changes, anemia, adenopathy and cachexia gradually improved over a period of several weeks. Renal abnormalities, including proteinuria, sediment changes and nitrogen retention of short duration, often returned to normal during steroid-induced remissions. The long standing renal lesions, particularly those associated with hypertension, are unaffected by hormonal therapy but seem to be helped by nitrogen mustard.[5,6] Two patients had a severe nephrotic syndrome of systemic lupus erythematosus with uremia and hypertension. Both were unaffected by doses of triamcinolone as high as 80 mg. a day. One patient with a mild nephrotic syndrome did not have diuresis with the new steroid but had an excellent diuresis from nitrogen mustard. Another patient with low grade nephropathy showed no change.

In 18 patients there was a decrease in weight, averaging 10.7 pounds with a median of 9 pounds and a maximum of 18 pounds. The average loss in terms of per cent of initial body weight was 7.8 with a median of 8.2 (see Table 3). The change was usually gradual and progressive over months rather than acute during the first few days of change to the new steroid. If there was much edema of nonrenal origin, this disappeared within a week. Cushingoid appearance induced by other steroids did not abate. The decrease in weight is apparently owing to a combination of several factors: One is a complete lack of sodium retention with this steroid, even less than with prednisone; another, a great deal less appetite stimulation, the least of any of the steroids currently available; a third factor is muscle wasting due to probable negative nitrogen balance, which will be discussed below. In six patients, all females, there was definite overt atrophy of muscles of the extremities and pronounced weakness along with increased Cushingoid appearance. This change did not occur in any of the seven males in the series who were on equally large doses of triamcinolone.

TABLE 3.—*Clinical and Laboratory Changes Produced by Triamcinolone*

CLINICAL CHANGES	Median	Mean
Weight:		
Decreased (18 cases) (pounds), range 6 to 18 pounds	9.0	10.7
Decreased (loss in per cent of initial body weight), range 3.8 to 13.5	8.2	7.8
Unchanged (8 cases).		
Increased (3 cases), range 3 to 29 pounds	....	13.3
Blood Pressure (mean pressure, mm. mercury):		
Unchanged in 20 cases.		
Decreased (4 cases)	....	23.0
Increased (5 cases)	....	29.0
LABORATORY CHANGES		
Hemoglobin (grams):		
Unchanged in 16 cases.		
Decreased (3 cases)	....	1.1
Increased (10 cases)	2.2	2.7
White cell count (thous./mm.^{3}):		
Unchanged in 19 cases.		
Decreased (0 cases).		
Increased (10 cases)	5.0	4.1
Sedimentation rate (Wintrobe):		
Unchanged in 10 cases.		
Decreased (9 cases)	23.0	23.7
Increased (4 cases)	....	28.0
Inadequate data (6 cases).		
L.E. cells (rotary method):		
Unchanged in 5 cases.		
Decreased in 7 cases.		
Disappeared fully in 4 cases.		
Increased in 2 cases.		
Remained absent in 7 cases.		
Inadequate data in 4 cases.		

Weight increased in three patients, one man gaining 29 pounds after six weeks of therapy, and was unchanged in eight patients. Edema of one plus appeared in one patient—this despite a loss of weight. There was no evidence of a low sodium syndrome or potassium depletion clinically or by electrolyte determinations. Tests were performed whenever any symptoms appeared possibly related to these changes.

The mean blood pressure was unchanged in 20 cases. It decreased an average of 23 mm. (mercury) in four cases and increased an average of 29 mm. in five cases. Two of the five patients with increase in pressure had uremia.

Changes in Laboratory Observations

Details of changes that occurred in results of laboratory determinations during therapy are shown in Table 3. The hemoglobin increased in ten cases, the increase averaging 2.7 gm. per 100 cc. with a median of 2.2 gm. A slight decrease occurred in three cases, the average decline being 1.1 gm. In 16 instances the hemoglobin was unchanged. In 14 of the patients the hemoglobin had already been elevated to a normal range by previous steroid treatment.

The leukocyte content increased an average of 5,060 per cu. mm. in ten cases, with a median of 4,100. It was unchanged in 19 instances, and in no case did it decrease.

The sedimentation rate (Wintrobe) decreased in nine patients an average of 23.7 mm. in one hour with a median of 23. It increased in four cases an average of 28 mm. There was inadequate data in six cases.

L.E. cell tests performed by the rotary technique demonstrated a decrease in positivity in seven cases and an increase in two cases.[8] The cells fully disappeared in four patients within a minimum of four weeks. L.E. cells were unchanged in five cases and remained absent throughout therapy in seven patients, five of whom had had L.E. cells before previous therapy. In four cases data was inadequate.

Side Effects

The most serious side effect of triamcinolone was muscle weakness. With this steroid also is associated greater severity of cutaneous changes such as Cushingoid appearance, acne, hirsutism and striae than occurred with older hormones of this type. There has been no problem with mineral corticoid effects such as salt retention or hypertension except as noted above.

The side effects of triamcinolone as compared with those of prednisone and prednisolone are shown in Table 4. Only five patients in the triamcinolone treated group had the benefits of prednisteroid therapy before they began taking the newer hormone. Hence the two groups are somewhat comparable, for they either were untreated before the use of steroids was begun or had been treated with cortisone or hydrocortisone for the most part. The incidence of Cushingoid appearance with moon face was quite similar in both groups. Severe hirsutism was noted in 21 per cent or six cases of the triamcinolone treated group as against 3 per cent in the prednisteroid group. Hirsutism appeared within four weeks on doses of triamcinolone as low as 16 mg. a day and was much more pronounced than the author observed with the older steroids. At times the entire forehead was covered with hair. No excessive hirsutism of this type was found in males. The medication was stopped in one patient because of hirsutism. Striae and ecchymoses were more severe and common with the newer steroid, being prominent in 14 per cent of cases, as against 3 per cent with prednisteroids. Edema accumulated in only one of the patients receiving triamcinolone and in 6 per cent of the prednisteroid group.

TABLE 4.—*Side Effects of Triamcinolone Compared With Those in a Similar Series of Patients Treated with Prednisone and Prednisolone*

	No. Cases in Patients Receiving Triamcinolone	Per Cent	Per Cent on Prednisone or Prednisolone*
CUSHINGOID APPEARANCE			
After transfer from older steroids:			
Increased	4	14	12
Decreased	0	0	5
Unchanged	4	14	17
Initial appearance after starting triamcinolone as first steroid	4	14	15
Initial appearance after transfer to triamcinolone from other steroids	1	3	0
None at any time while receiving triamcinolone	16	55	51
Total number who developed or maintained Cushingoid features	13	42	42
OTHER SIDE EFFECTS			
Pronounced hirsutism	6	21	3
Acne	5	17	16
Striae (marked)	4	14	3
Ecchymoses (marked)	4	14	3
Edema	0	0	6
Muscle weakness†	6	19	0
Diabetes mellitus (severe)	0	0	6
Epigastric distress	2	6	3
Peptic ulcer‡	1	3	3

*Data from the author's comparable series of 37 cases treated with prednisone or prednisolone.[6] The patients in this series had previously been treated with hydrocortisone, cortisone and corticotropin. Fifteen of these patients subsequently had triamcinolone.

†Occasionally profound leg weakness may occur in active systemic lupus erythematosus due to spinal cord or peripheral nerve vascular involvement. This is quite rare and usually responds well to increased steroid therapy.

‡The patients on triamcinolone were not on a prophylactic ulcer regimen whereas all those on prednisone or prednisolone had been.

Two patients treated with triamcinolone noted epigastric burning after taking the hormone. In one case the burning abated when the patient ingested an antacid preparation for several weeks while receiving the steroid, and in the other case it spontaneously disappeared. In neither patient was there significant change in the conditions observed in the gastrointestinal studies previously discussed. One patient in the prednisteroid series developed similar epigastric symptoms despite a prophylactic ulcer regimen; one patient on triamcinolone, as noted above, developed an acute peptic ulcer. Routine prophylactic ulcer therapy was not employed in the triamcinolone series, whereas it was in the prednisteroid group.

The most serious side effect of triamcinolone therapy was the appearance of profound muscle weakness, particularly in the extensor muscles of the legs and occasionally in the deep back muscles. The patients were characteristically unable to rise from a chair without using their hands or climb stairs without holding the bannister. They could not rise from a squatting position unaided. These symptoms appeared in from four weeks to as long as 32 weeks after therapy was begun. The average time of appearance was 13 weeks with a median of five weeks. The lowest dose at which it appeared was 12 mg. a day. There did not appear to be a relationship between the largest doses and the development of this side effect.

The onset of this change was quite insidious but when fully developed it was profound and necessitated cessation of the steroid in all six cases. It did not occur in males. In all cases the development of weakness seemed to be preceded by a severe Cushingoid appearance with definite atrophy of the extremity muscles. Weakness in the upper extremity was not as evident as in the lower. Electrolyte studies in four cases showed the serum sodium and potassium to be normal. Two patients were changed to prednisone and four to hydrocortisone in equivalent dosages. About two weeks after the change, their strength gradually began to return to normal. One of the patients had transitory paresthesia for one day in her legs and she could have had primary weakness due to vascular systemic lupus erythematosus. None of the other patients had any sensory changes. Reflexes were intact and active in the legs. These changes were similar to the quadriceps weakness seen in hyperthyroidism and myasthenia gravis.

Case 1 below illustrates the appearance of muscle weakness while the patient was receiving triamcinolone as well as refractoriness of the renal lesion to diuresis without the aid of nitrogen mustard.

Case 1. A 31-year-old Chinese housewife became ill in March, 1954, with butterfly area rash, loss of weight, arthralgia and pleuritic pain. Upon biopsy of a specimen of skin lupus erythematosus was diagnosed and the patient was given cortisone, 75 mg. a day, with only moderate relief of symptoms. When first examined by the author, in November 1954, the patient was slightly Cushingoid. Blood pressure was 150/85 mm. of mercury. A grade II blowing systolic murmur was present in the pulmonic area. There was no edema. The patient had normocytic anemia, the hemoglobin content being 11.2 gm. per 100 cc. The sedimentation rate (Wintrobe) was 56 mm. in one hour. The reaction of the L.E. cell preparation was 4 plus. Upon urinalysis, 4 plus albuminuria was noted. The urinary sediment contained many hyaline and granular casts and oval fat bodies. Urinary protein excretion was 8.5 gm. in 24 hours. Blood urea nitrogen content was 42 mg. per 100 cc. and cholesterol 280 mg. per 100 cc. Phenolsulfonphthalein clearance was 26 per cent in 15 minutes and in 2 hours was 77 per cent. Hydrocortisone, 20 mg. four times daily, was substituted for the cortisone the patient had been taking, and 20 mg. of nitrogen mustard was given intravenously. By February, 1955, there had been no change in the urine, although the blood urea nitrogen had decreased to 26 mg. per 100 cc. Another 20 mg. of nitrogen mustard was given. During the following two months, albuminuria decreased to 2 plus and there was a decided decrease in abnormal elements in the urinary sediment. There were about 30 erythrocytes per high power field and no casts. As the Cushingoid appearance continued, a change was made to prednisone from hydrocortisone but the appearance did not change. By May of 1956, the patient was asymptomatic and results of urinalysis were unchanged. All steroids were discontinued. In November, 1956, gross hematuria suddenly appeared. Morning periorbital edema and low grade fever were present. There were red cells and granular casts in the urine. Blood urea nitrogen was 45 mg. per 100 cc. and cholesterol, 160 mg. Prednisone, 80 mg. a day, was begun and diuresis lowered the body weight by 6 pounds. After four days the urine returned to normal in color and the number of erythrocytes returned to the previous level of 40 per high power field. In May, 1957, the patient felt well and again all steroids were discontinued. The albumin reaction of the urine was 1 to 2 plus, and moderate numbers of red cells and casts of various types were noted.

On October 29, 1957, the patient noticed increasing periorbital edema in the morning and definite ankle edema. The blood urea nitrogen was 26 mg. per 100 cc. The urinary protein reaction was 4 plus. Triamcinolone was begun, 10 mg. four times daily. By November 9 the ankle edema had increased to 2 plus and a dry cough began. Striae on the feet from the edema and administration of steroids were noted. The urinary protein reaction decreased to 1 plus. Because of progressive gain in weight and edema, chlorothiazide (Diuril) 1.0 gm. twice daily was added but without much response. Three days later the dose of the diuretic was increased to 1.0 gm. four times daily and still there was no reduction in weight. At this time the blood urea nitrogen was 46 mg. per 100 cc. and the cholesterol content 617 mg. per 100 cc. On November 14, 1957, 20 mg. of mustard was given intravenously. Within two days the body weight decreased 4 pounds, and in the next 12 days another 15 pounds. On November 19 the dose of chlorothiazide was reduced to 0.5 four times daily, then was omitted completely the following week. This diuretic had no apparent effect on the edema. On November 29 the blood urea nitrogen was 29 mg. per 100 cc. and only a trace of edema remained. At about this time the patient noticed the insidious onset of muscle weakness; she was unable to rise from a chair without using her hands to lift herself. During the next few weeks weakness progressed to the point that the patient could not climb stairs without pulling herself up on the bannister. When examined again on December 10, she had become decidedly Cushingoid, with apparent atrophy of arm and thigh muscles. She was completely unable to rise from a chair without using her arms. When asked to rise from a squatting position, she collapsed to the floor and was unable to lift herself without help. Triamcinolone, which was being given at the rate of 32 mg. a day, was discontinued and prednisone, 20 mg. a day, was begun. (Although serum electrolytes were not determined in this case, serum electrolytes, including potassium, were within normal limits in four of the six patients in whom these tests could be done.) In the ensuing three weeks the patient had gradual improvement of strength and finally could rise from a chair unaided. Because of persistent urinary abnormalities, with rise in albuminuria to 4 plus, the dose of prednisone was increased to 40 mg. a day. During the following week the ankle edema increased to 2 plus. The weakness did not return although the patient continued to receive this larger dose for an additional three weeks.

Case Summary

In the foregoing case profound muscle weakness appeared six weeks after the administration of triamcinolone was begun and disappeared gradually three weeks after a change was made to prednisone in equivalent doses. The patient had received cortisone, hydrocortisone and prednisone in equally high doses previously and weakness had not developed. Also in this case the effectiveness of nitrogen mustard as a diuretic agent was demonstrated, the drug bringing about amelioration of the renal lesion of lupus after steroids and chlorothiazide failed. In addition, the benefit of steroids in acute glomerulonephritis due to systemic lupus erythematosus was shown.

DISCUSSION

Triamcinolone seems to have a definite place among the anti-inflammatory agents. It has less sodium-retaining property than other steroids currently available. It has no significant gastrointestinal stimulating activity, which should make it useful in patients who have had problems with peptic ulceration on older steroids. The development of an acute duodenal ulcer in one of the patients in the present series without changes in the gastric analysis and uropepsin excretion suggests that the mechanism of ulceration of the stomach and duodenum may not be related to acid or pepsin secretion but be caused by other factors such as a decrease in viscosity of gastric mucus or perhaps retardation of normal healing by the steroids.[10,11]

Many patients are helped more by triamcinolone than by the older steroids. Fourteen of the patients in the present study had received previous therapy with all the older anti-inflammatory hormones and seven of them were better controlled and felt better with triamcinolone than with previous steroids. Male patients showed no Cushingoid features while receiving this steroid, even in doses as high as 48 mg. per day for six weeks. In men triamcinolone may be the agent of choice.

The most serious side effect of triamcinolone in systemic lupus erythematosus is muscle weakness. It was observed in about 10 per cent of rheumatoid arthritic patients.[4] In that series it was of only minor degree, but the dosages used were smaller than those given in the present series. It is noteworthy that in the present series muscle weakness did not occur in males, possibly due to the protective action of testosterone against the protein catabolic action of triamcinolone.

Triamcinolone has more cutaneous side effects than the older hormones, hence would not be the one of choice for beginning therapy in the average patient.

Another disadvantage of this agent is that it, like the rest of the unsaturated steroids, varies greatly in potency from patient to patient. In some cases these hormones are of the same potency as hydrocortisone on a milligram basis, and in others they are ten times as powerful. Because of this great variability in dosage and individual unpredictability of action, I prefer to begin treatment in the average case of systemic lupus erythematosus with hydrocortisone unless there is a problem of cardiorenal disease.

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Arthritis

The Use of Physical Therapy as an Aspect of Management

EDWARD P. REESE, *M.D.*, Lynwood

• In some cases arthritis can be controlled even in the acute stage by physical therapy alone. In many cases, recovery depends on how thoroughly and intelligently such methods are applied.

Heat, ultrasound and therapeutic baths relieve pain and spasm, permitting greater freedom in passive and active exercise. Exercise is necessary in maintaining and restoring function to arthritic limbs. Because the atrophy produced by rheumatoid arthritis is greater than that due to mere disuse for the same length of time, resistive exercise is especially valuable in building muscle, and this can be carried out even during active inflammation. Without exercise the muscles weaken and throw a greater burden on the already disabled joints.

At the same time the patient must be relieved of undue stress and trauma by planned rest, splinting, bed posture and, later, crutches and other aids to ambulation. Efforts should be made to prevent contractures and deformities.

Occupational therapy increases muscle strength, range of motion, work tolerance and mental status. A dynamic and carefully planned rehabilitation program hastens restoration of the patient's independence and usefulness.

During the years in which cortisone, gold and salicylates have established their value and their limitations—in the treatment of arthritis, progress has been made too in the methods of physical medicine, although often such methods have been neglected by physicians. The author has observed cases in which the steroids were used to control the inflammation while the other effects of disease—contractures, muscular atrophy, deformity, osteoporosis and the ability of the patient to carry out the activities of daily living—were ignored. The opposite emphasis, indeed, is necessary: In a large number of cases the inflammatory stage can be adequately controlled by physical measures such as heat, hydrotherapy, ultrasound, exercise, avoidance of trauma, and carefully planned rest, all of which can also aid recovery.

Obviously, joint tuberculosis and malignant disease must be ruled out before physical therapy is considered. Thickening of the synovium, for example, may be due to sarcoma.

Heat Therapy

Heat relieves spasm and pain, dilates vessels, increases circulation, improves tissue metabolism and hastens the absorption of exudates. Heat may be applied locally or generally. It should not be applied to a limb with arterial insufficiency where the resulting increase in tissue metabolism may not be compensated by sufficient vasodilatation and hyperemia, for gangrene may result.

Heat from electric lamps—luminous heat—is useful for all stages of rheumatoid and osteo-arthritis. In the clinic a 1,000-watt tungsten-filament light bulb is used, but for home use a 250-watt bulb with reflector is adequate, or a luminous baker can be built of sheet metal with a scrap-iron frame and four 60-watt bulbs.

The paraffin bath at 130° F. is used in the treatment of hands and elbows, but is objectionable for treatment of the feet because it quickly develops an odor from perspiration. The affected area is momentarily dipped in the paraffin, which is then allowed to harden. This is repeated until a thick coat has collected; then the area is allowed to remain in the bath or is covered with towels for 30 minutes to retain the heat. The exposed skin must not be left in the bath as the coated area is, or it will burn. Moving a coated joint breaks the coating. For home use four pounds of paraffin (usually 16 blocks in the commercial form) is mixed with a cup of mineral oil, and this solution may be used repeatedly. It is highly inflammable and must be kept from open flame.

Short-wave and microwave diathermy is not advisable in the treatment of acutely inflamed joints because it often aggravates pain.

Another method of applying heat is with moist packs containing a colloidal gel filter which has absorbed water during storage in a thermostatically controlled tank. Such packs supply at least 30 minutes of effective moist heat.

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Ultrasound Therapy

Ultrasound helps to decrease arthritic pain, muscle spasm, joint swelling and inflammation.[6] It is also used after intra-articular injection of steroids to aid dispersion. An application of one-half watt to one watt per square centimeter from a moving source has produced no cumulative or harmful effect.[5]

Roentgen Therapy

Neither heat nor ultrasound should be applied concurrently with roentgen therapy, as their use makes it difficult to determine which of these methods is the cause of any redness or vasodilatation that may result. Ultraviolet therapy has been used to relieve psoriatic arthritis skin lesions. Roentgen therapy may decrease pain and inflammation in rheumatoid spondylitis, and during such relief the patient is given intensive breathing and postural exercise. Irradiation should not be considered, though, before a patient has had adequate trial of ultrasound and luminous heat. Ultrasound has been credited with relief comparable and in some cases superior to that of roentgen therapy.[6] If arthritis is due to lupus erythematosus, exposure to sunlight or to any light in the ultraviolet spectrum may cause acute exacerbation of the underlying disease.

Baths

Thermal baths, covering the patient to the shoulders, are given at a temperature of 100° to 103° F. for 10 minutes. At the higher temperature, in the author's experience, the patient's oral temperature was raised on the average by 3° F. and in some cases of peripheral rheumatoid arthritis to 105° F. Besides this effect, thermal baths produce vasodilatation, increase the cardiac rate, the metabolic rate and the peripheral circulation, promote diaphoresis, absorption of exudates and diuresis and relieve muscular spasm and pain. After a bath the patient should be wrapped in blankets and allowed to cool gradually for 30 minutes. He should be warned not to take a hot bath at home immediately before retiring for the night, because the bedding will become soaked with sweat.

Thermal baths are contraindicated in tuberculosis, heart disease, dyspnea, pregnancy, menstruation, aneurysm, hypertension, hemorrhagic disease, moderate or severe peripheral vascular disease, dermatophytosis and blood chloride deficiency (heat prostration).

Whirlpool baths permit the application of even warmer water to the extremities, as the massaging action of the whirling water produces a relative surface anesthesia. Debilitated patients may tolerate no more than a 105°F. temperature, but usually 110° is acceptable. The combination of heat, anesthesia and buoyancy releases pain and spasm and thereby increases the range of motion of the immersed joints and permits exercise.

The therapeutic pool is especially useful for exercise, with the buoyancy of the water acting as either an assistive or a resistive force. The buoyancy may aid in early ambulation. Passive exercise can be given while the patient lies on a table in the pool, with the warm water reducing pain and spasm. Patients should not share a pool if they have respiratory infection, fever, acute infectious disease, draining wounds or skin infection, or if menstruating or incontinent.

The Hubbard tank, with water at 100°F., is frequently used for patients with inflammation of several joints. The agitators can be moved about to the affected joints while exercise is carried out. Patients who cannot walk can be lifted into a pool or a Hubbard tank on a stretcher attached to an overhead crane.

When a patient with an open wound or draining infection is treated by any kind of bath, an antibacterial emulsion (pHisoHex®) is added to the water.

Contrast baths are given by immersing an extremity at 100°F. for 10 minutes and then at 60° for one minute, then in the hot water for four minutes and the cold for one minute alternately for a half hour. In rheumatoid arthritis, it has been observed, vasoconstriction due to cooling is more pronounced and prolonged. According to Fricke and Gersten[2] the majority of their patients with rheumatoid arthritis received no remarkable relief from contrast baths. This treatment should be used with caution in patients who have any tendency toward peripheral vascular disease, since it may cause prolonged spasm of the peripheral vessels unrelieved by the ensuing application of heat and possibly result in thrombosis.

Another measure, sometimes used to relieve pain and muscular spasm, is ethyl chloride spray.

Exercise

Therapeutic exercises should be continued throughout the patient's life. They begin with passive exercise in which the muscles should be completely relaxed while the therapist moves the part through the indicated range of motion, not only to maintain but to increase this range and prevent ankylosis and contracture. The exercise may vary from a few repetitions in a limited range to strong stretching of contractures, but the extent must be definitely prescribed. Forceful manipulation of the wrists and fingers may induce intra-articular hemorrhage, adhesion, and subsequent shrinking of the capsule. Gentle stretching more efficiently corrects deformity or contracture, although manipulation may be indicated for the larger joints. As mentioned above, heat is applied to reduce pain and bring about relaxation and vasodilatation before any form of exercise.

Isometric muscle-setting exercise is the voluntary contraction and relaxation of muscles without joint motion. It may be carried out while the part is in a cast or splint.

In assistive exercise the patient moves the part through the full range of motion with the therapist assisting, perhaps only to initiate the motion or to carry it beyond the voluntary range. The patient may assist himself with an uninvolved limb or through pulleys and other mechanical devices such as the shoulder wheel and the finger stepladder. Weight and friction may be overcome by such devices as roller skates and powdered surfaces.

Because the atrophy brought about by rheumatoid arthritis is greater than that caused by mere disuse for the same length of time, resistive exercise is important in building muscle. Repetitive exercise against low resistance increases endurance, but fewer repetitions against maximum resistance builds muscle strength, power, girth and bulk. This difference is due to the "all or none" principle that the individual muscle fiber either contracts maximally or does not contract at all. The greater the resistance against a muscle bundle, the greater the number of fibers that take part in the contraction. A few repetitions against maximum resistance allow the patient to contract all muscle fibers before fatigue develops. Resistance can be applied by the therapist or by sandbags, bar bells or dumbbells. The Elgin exercise table provides pulleys and weights for either assistance or resistance through all ranges of motion.

Active joint inflammation does not contraindicate resistive exercise; on the contrary, strengthening surrounding skeletal muscles has both a prophylactic and a therapeutic effect, for strong muscles help to support the inflamed joint, whereas weak muscles throw the burden on soft tissues such as the capsule, the ligaments and the articular surfaces.

For resistive exercises, the amount of weight applied and the goniometric readings should be recorded. Flexion and extension of the joint should be slow and complete at each effort. Resistive exercise of uninvolved areas keeps them in condition to aid rehabilitation.

A special exercise is needed for the vastus medialis, which carries the knee through the last 10 degrees of extension and locks it. When the knee is extended by a swinging motion the momentum completes the extension without the vastus medialis contracting. This muscle benefits from static loading exercise in which the leg is held horizontally extended from the knee while weights are added to the ankle.

Exercise aids in dispersal of injected steroids throughout a joint and adjacent surfaces.

Rest

A patient with rheumatoid arthritis should have scheduled rest periods during the day as well as sufficient sleep at night, but absolute bed rest without any exercise or motion is harmful. All efforts should be made to encourage him to keep his joints moving. If the patient will not or cannot carry out active or assistive exercise he should be passively exercised through the full range of motion. Even in the presence of severe inflammation or debilitation, assistive and, usually, active exercise can be carried out if the patient is properly motivated.

Absolute bed rest would be prescribed with much hesitancy if its adverse effects were considered: loss of protein, minerals and vitamins; muscle weakness and atrophy, contracture, osteoporosis and reduction of postural steadiness. Osteoporosis can cause hypercalciuria, while the recumbent position reduces urinary drainage and may contribute to formation of urinary calculi. After prolonged bed rest, great caution must be used in resuming ambulation, because of the abnormal bone fragility.

Elimination of Trauma

Trauma in arthritis can be caused by overweight, by weight-bearing on unstable or flexed joints, by poorly fitted shoes, by poor posture, by occupational stress and even by psychic stress.

Patients with rheumatoid arthritis often lie in bed with knees and elbows in flexion, and contractures quickly result. Sometimes this effect is promoted by the placing of pillows under the knees, or by raising the hospital bed at this point. The contrary effect should be sought, the patient lying flat with a footboard and cradle supporting the blankets to prevent footdrop, and with pillows or sandbags placed along the lateral aspect of the lower extremities to prevent external rotation of the hip. The arms should be kept semi-abducted with the elbows and wrists straight and small folded towels placed under the palms. For a change of position, lying on the abdomen prevents and corrects flexion deformities of the hips.

Splinting may help to relieve spasm and deformity, but it should be adapted to the degree of deformity present.[3]

Flexion deformities of the knee, knee effusion or weakness of the quadriceps contraindicates full weight-bearing, for ambulation on a flexed knee throws an abnormal postural strain on other joints and on the back. Wheelchair footboards holding the knees extended are indicated in acute knee involvement. Sitting in a chair for long periods causes flexion deformities of hips and knees. Patients with lower extremity weakness may ambulate in a pool or with the aid of parallel bars, a walker or crutches.

In acute involvement of the feet, full weight-bearing should be limited, for there is a tendency for a rigid valgus equinus to develop, with a flat anterior arch and cocked-up toes, and for the metatarsal phalangeal joints to become deformed by subluxation.

Rheumatoid Spondylitis

Rheumatoid spondylitis causes flattening of the lumbar curve of the spine, limitation of motion, dorsal kyphosis, radiculitis and compensatory extension deformity of the neck. Usually the shoulders become involved, resulting in limitation of motion, and therefore they should be exercised early in the course of the disease before the involvement is manifest. Chest expansion should be recorded early, for it decreases as the ribs slope down anteriorly and tend to become fixed in that position. The patient's height, too, should be measured, as also the distance from his fingers to the floor as he stands with the spine flexed.

Ultrasound and luminous or moist heat relieve radicular and other pain and spasm in rheumatoid spondylitis. The patient should practice intensive breathing and postural exercises. He should sleep on a bed board. Several times a day he should lie on a hospital bed with his head at the foot end and the knee elevator raised under his dorsal region, producing hyperextension of the spine. Pillows placed under the thoracic spine also accomplish hyperextension.

A spondylitic patient should not remain upright for long periods. When he begins to slump he should rest in recumbent hyperextension, even at work, several times a day. A back brace is undesirable for several reasons. The strong extensor muscles of the spine serve as the best "back brace," and if an artificial brace is used the patient tends to neglect his exercises on the excuse that the brace is sufficient. On discarding the brace, he has increased weakness of the back extensors and deformity quickly develops. The extensor muscles of the spine should be intensively exercised, while lumbar lordosis is corrected by straight-leg raising and sitting-up exercises that strengthen the abdominal muscles.

Other Arthritic Diseases

Osteoarthritis, although a degenerative disease, may result from prolonged joint irritation or trauma, which should be eliminated. Overweight, for example, may cause hypertrophic arthritis of the weight-bearing joints—the hips, the knees and the lumbar spine. The pain-relieving and spasm-relieving measures discussed above may be applied. If the cervical spine is involved, mechanical intermittent traction may be used to relieve radiculitis. Mild passive, active and assistive exercises are indicated.

Degenerative disease of the hip, coxae malum senilis, causes softening, osteoporosis and sometimes vascular necrosis of the femoral head. The glutei and thigh extensors become weakened. Forward inclination of the pelvis may cause low backache, and flexion and adduction contractures of the hip develop rapidly. Treatment is centered about decreasing trauma and weight-bearing on the hip. Obesity must be reduced, crutches may be necessary, and the patient may be exercised by ambulation in parallel bars or in water. These active exercises, as well as passive methods, are aimed at maintaining both muscle strength and range of motion. Flexion contracture of the hip may be prevented by having the patient lie on his abdomen and exercising the extensor muscles of the hip. Traction may relieve such deformity and take pressure off the hip joint.

Occupational Therapy

Occupational therapy improves muscle strength, range of motion, work tolerance and mental status through creative and productive activity.

The psychiatric function of occupational therapy is to correct or ameliorate extreme depression, agitation or anxiety, to which the arthritic patient is particularly subject.

Tonic therapy keeps the patient's mind occupied and prevents deconditioning of uninvolved members. The project chosen should be interesting to the patient, providing incentive, and should not be too difficult, for failure to accomplish it leads to discouragement and depression.

Kinetic occupational therapy maintains and increases range of motion and muscular strength of the affected parts. As the patient's condition improves, the therapeutic tasks should be changed to require stronger effort and greater range of motion. The bicycle saw may be given added resistance and the pedals can be moved outward for a greater cycle. On a printing press the patient reaches far above his head to pull the handle down to chest height, and pulleys and weights may be added to resist his effort. The pronounced atrophy and weakness of the intrinsic muscles of the hand, particularly the interossei, are corrected by cord knotting. Working with bouncing clay increases both strength and range of hand motion. Weaving on a loom exercises upper and lower extremities through a wide range of motion.

Metric occupational therapy demonstrates measurably the patient's increase in work tolerance and strength to the level demanded by daily living and by the patient's occupation. This in itself can provide an incentive for effort as the work load is systematically increased within the tolerance of pain and fatigue.

Occupational therapy can be given initially on the ward, but as soon as possible the patient should be sent to the occupational therapy shop to release him from the confines of his room and allow him to visit with other patients, who encourage each other by their progress and group spirit.

REHABILITATION

The rehabilitation of arthritic patients is important to both the humanitarian and the economic aspects of preventing a great segment of our population from becoming helpless cripples. Rheumatic diseases lead all other diseases and disorders as the greatest cause of workdays lost because of disability—it is estimated, 80 million workdays each year in the United States. Half of the 11,000,000 Americans who have rheumatic disease are partially or totally disabled, incurring an annual loss of over two billion dollars in welfare and disability payments, medical expenses, lost wages and taxes.[1] Another 2.8 million have been forced to change their occupation or lessen their output.[2] The disabled patient may require the services of another member of the household to assist him in self-care, thus decreasing family earning power.

A dynamic rehabilitation program prepares the patient to become a productive wage earner and active member of society. He is trained in the activities of daily living such as toilet needs, dressing, combing his hair, shaving and feeding himself. Capability of self-care allows the remainder of the family to be gainfully employed. The patient lacking motivation is difficult to treat, failing to carry out his treatment program and making little effort to correct his deformities. To insure proper motivation and instill confidence a detailed progressive objective rehabilitation program should be formulated. The therapist should reassure the patient, impart enthusiasm, listen to his problems, gain his confidence, and allow him to ventilate his anxiety, anger and hatred. The residual disability that will persist after the most intensive rehabilitation efforts should be determined. Psychometric and vocational testing determine the patient's innate attributes, manual dexterity, coordination, mental status, intelligence, mechanical or artistic inclinations and specific centers of interest. His basic education, emotional stability and personality are evaluated. The patient's interests, ability, motivation and progress can be observed while he works in the various physical medicine departments. Several occupations which are particularly suited for the patient are determined—those that he has a reasonable chance of succeeding in without physical, emotional and mental strain. When he has made his choice, training is immediately instituted to prepare him for its requirements. Definite progression toward this ultimate goal provides motivation, whereas haphazard palliative treatment lacking direction as to an ultimate realistic goal is demoralizing, frustrating and confusing. The value of each prescribed activity in securing this goal is emphasized to the patient.

Retraining may be carried out by the educational therapy and manual arts therapy sections of a Veterans Administration hospital. The California State Department of Vocational Rehabilitation will aid in supplying both therapy and training for those who can be returned to productive occupations. Volunteer skilled and professional people from the community may teach patients. Many colleges supply practice teachers. The hospital and public libraries can supply textbooks. The patient may obtain a high school diploma during hospitalization, or may take correspondence courses for high school, college or technical vocational training. He may receive treatment and prevocational training in a rehabilitation center and later work in a "sheltered workshop."

Arthritic patients who thrive on attention encourage others to care for them rather than care for themselves. The family should be advised that their waiting upon the patient is detrimental. Utensils and clothes should be placed in locations that force the patient to carry his joints through the fullest range of motion in reaching them. Here, too, though, the patient must not be discouraged by tasks beyond his abilities.

Patients with decided deformities require self-help devices to carry out activities of daily living; these may be improvised in the occupational therapy shop or purchased. The Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, publishes a descriptive list of commercially manufactured self-help devices and where they may be purchased. For those whose extension contractures of the interphalangeal joints prevent adequate grasping, large balsa-wood handles are attached to tools and utensils such as pencils, combs, knives and forks. As finger flexion increases, the handles are made smaller. Exercise, dexterity and coordination of the hands are obtained while using these modified utensils. Clothing may be fastened with large buttons. Rheumatoid spondylitic persons with stiffness of the back and hips rise from a seat by swinging forward and upward with the entire body. This action is more pronounced when hands and shoulders are involved. For such patients, chairs should be raised, have solid arm rests and stiff back and seat. Toilet seats should be made higher.

Patients with deformities that prevent ambulation can arrange their kitchens so that everything is within their reach.

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Mortality Rates in Patients with Burns

A Report of Experience at San Francisco City and County Hospital, 1943-1956

ALBERT G. CLARK, *M.D.*, and J. HAROLD HANSON, *M.D.*, San Francisco

• A review was made of the cases of 93 patients with burns covering more than 20 per cent of the body surface who were treated at the San Francisco City and County Hospital, University of California Service, between 1943 and 1956.

The mortality rate increased from 40 per cent during 1943-1947 to 69 per cent during 1952-1956. A significant change in survival time was noted: During 1943-1947, 69 per cent of the deaths occurred within 48 hours of admission; during 1952-1956, only 19 per cent of the deaths occurred within the first 48 hours. In the period 1943-1947 the majority of deaths resulted from shock in the immediate post-burn period; in the later years of the study the major cause of death was infection.

No patient more than 50 years of age who had burns of more than 25 per cent of the body surface survived. Only one patient with burns involving more than 45 per cent survived.

No patient who had a blood culture positive for bacteria survived. The use of antibiotics had no effect on the incidence of infection. Elderly patients, children and alcoholics were less able to resist the effects of infection.

The lowest mortality rate was in the age group of 15 through 35 years.

DURING 1956 several moderately to severely burned patients admitted to the University of California Service at the San Francisco City and County Hospital died. They were patients who, on the basis of previous experience, should have survived. In attempting to evaluate the causes of death it was soon evident to the staff that clinical impressions were not sufficient. A more detailed study of burned patients who had been admitted to the hospital in the past was undertaken to see if a significant mortality trend was taking place and to evaluate past and present methods of therapy.

The records of burned patients admitted to the University of California Service from 1943 to 1956 inclusive were studied. (All burned patients who are either indigent or incapable of being moved and who require hospitalization are admitted from the emergency unit to either the Stanford University Service or the University of California Service of San Francisco City and County Hospital; coverage of the emergency unit is rotated weekly.)

During the 14-year period, 488 burned patients were admitted to the University of California Service. Only those patients with second and third degree burns of more than 20 per cent of the body surface were studied in detail, since those who were less severely burned usually survived with little or no supportive therapy. There were 110 such patients; 17 were transferred elsewhere for treatment, leaving 93 who received all their treatment on the University of California Service. Patients of all ages were included. All the burns studied were thermal injuries to the surface of the body. Initially all patients were treated in the emergency unit and then transferred to the open wards for men, women or children. The rule of nine* was used to estimate the amount of surface area involved.

In order to make a comparison with previous experience, the 14-year period was arbitrarily divided into three periods of five, four and five years. For no apparent reason there were fewer patients in the early post-war years; however, by 1956 the number of burned patients being admitted was definitely increasing. The problem of burns is of increasing importance to this hospital, particularly because of a heightened mortality rate (Table 1).

Mortality in Relation to Age and Area Burned

The cases of the 93 patients with greater than 20 per cent of their body surface burned are described in Table 2, which relates the age of the patient to the area burned. Two significant facts are evident from this table: (1) Only one patient in the entire group during this 14-year period survived with a surface burn of greater than 45 per cent. The patient was a four-year-old child, admitted in 1948, who had a 65 per cent burn, 20 per cent of which was third degree. (2) In the group of patients who were 50 years old or older only five survived; in this group no patient survived who had burns over more than 25 per cent of the body surface.

It seemed to us that our most intense studies and future efforts should be applied to the type of case

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*The head is considered 9 per cent of the body surface area; each of the arms, 9 per cent; the front of the torso, 18 per cent; back of torso, 18 per cent; each of the legs, 18 per cent; the neck, 1 per cent.

From the University of California Surgical Service of the San Francisco City and County Hospital, San Francisco 10.

Presented before the Section on General Surgery at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

TABLE 1.—*Relation of Age and Alcoholism to Mortality in Patients with Greater Than 20 Per Cent Surface Burns, University of California Service, San Francisco City and County Hospital, 1943-56*

Period		Ages 0 to 15	Nonalcoholics Ages 16 to 50	Alcoholics Ages 16 to 50	All Patients* 51 or Older	Total
1943-47	Patients	8	10	10	4	32
	Dead	1	3	5	4	13
	Mortality	12%	30%	50%	100%	41%
1948-51	Patients	3	7	0	6	16
	Dead	0	4	....	5	9
	Mortality	....	57%	....	83%	50%
1952-56	Patients	11	3	10	21	45
	Dead	4	1	8	18	31
	Mortality	36%	33%	80%	86%	69%

*Alcoholics 51 years of age or older were grouped with their age group; age more than 51 was arbitrarily considered a greater factor in mortality than was alcoholism.

TABLE 2.—*Mortality Related to Per Cent of Area Burned for 14-Year Period, University of California Service, San Francisco City and County Hospital, 1943-56, with Comparative Results at Massachusetts General Hospital, 1939-54 (Shown in Italics)*

		20 to 24 Per Cent	25 to 34 Per Cent		35 to 44 Per Cent		45 to 64 Per Cent		>65 Per Cent	
0 to 15 years	Total	10	4	*9*	8	*4*	2	*1*	2	*6*
	Dead	0	1	*1*	3	*2*	1	*1*	1	*6*
	Per cent mortality	0	25	*11.1*	37.5	*50*	50	*100*	50	*100*
16 to 35 years	Total	5	6	*11*	3	*7*	0	*3*	3	*5*
	Dead	0	0	*2*	0	*1*	....	*2*	3	*2*
	Per cent mortality	0	0	*18.2*	0	*14.3*	....	*67*	100	*40*
36 to 55 years	Total	4	3	*11*	6	*6*	7	*14*	10	*7*
	Dead	1	1	*1*	4	*3*	7	*12*	10	*7*
	Per cent mortality	25	33.3	*9.1*	66.7	*50*	100	*85.7*	100	*100*
56 to 100 years	Total	7	5	*4*	5	*3*	0	*10*	7	*9*
	Dead	5	5	*3*	5	*3*	....	*10*	7	*9*
	Per cent mortality	71.5	100	*75*	100	*100*	....	*100*	100	*100*

in which less than 45 per cent of the body surface was burned and the patient was less than 50 years of age (see Chart 1). Eight of the 41 patients who were in this category died. These eight patients can be divided into two groups: (1) *Children.* Four children died of septicemia. (2) *Alcoholics.* Four of the patients who died were alcoholics. Three of them apparently died of infection; the fourth died of coronary thrombosis.

Table 2 shows the relationship of the mortality rate to the area burned and to the age of the patient. For patients with burns covering 25 per cent or more of the body surface, we could compare data with data from the Massachusetts General Hospital series reported by Barnes.[1] Inasmuch as the reports covered a like period of time, the methods of therapy were probably similar.* It should be noted that in the age group of 16 to 35 years, there were fewer deaths from burns. Many investigators have pointed out that the patients of this age group are best able to survive injuries from burns. Only one patient of 43 older than 55 years in the combined totals of the University of California and Massachusetts General Hospital series survived with a burn of more than 25 per cent of the body surface. The age of the patient and the proportion of surface that is burned are still the major determining factors in the mortality rate of burned patients.

Chart 2 shows the relationship of mortality to the area burned in each of the three periods into which the 14-year period studied was divided. In all the time periods the mortality rate in patients with greater than 40 per cent burns was understandably high. It should be noted, however, that there has been a change in the mortality in the group with less than 40 per cent burns. During the first two time periods the mortality rate was quite low. During 1952-1956 there was a significantly higher rate than in the earlier periods.

Trends in survival time. Although more burned patients died in the later than in the earlier years of the study, a recent trend toward longer survival before death was noted (Chart 3). In the two groups admitted between 1943 and 1951, 68 per cent of the deaths occurred within 48 hours after admission. In the group admitted between 1952 and 1956, however, only 19 per cent of the deaths occurred within 48 hours of admission. Increased knowledge concerning fluid and electrolyte therapy has unquestionably brought about better handling of the shock phase in burned patients. However, many patients who survived the shock phase died later of

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*One hundred and ten patients with greater than 25 per cent surface burns were treated at Massachusetts General Hospital during a 16-year period; the mortality rate was 59 per cent. Seventy-one such patients were treated on the University of California Service of San Francisco City and County Hospital during a 14-year period; the mortality rate was 67 per cent.

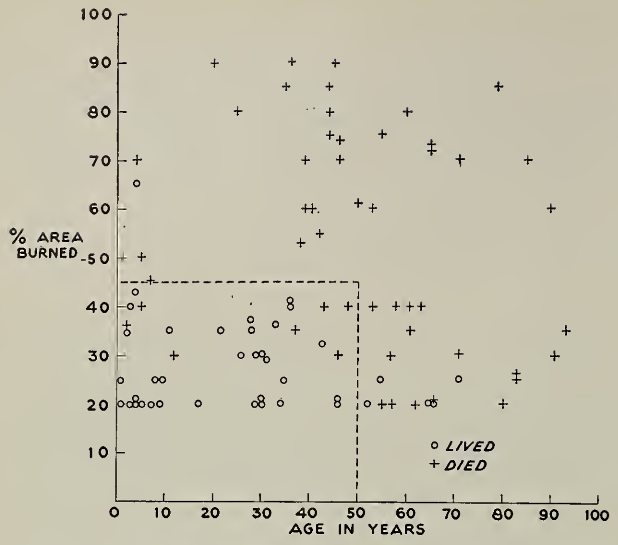

Chart 1.—Age as related to severity in burns of more than 20 per cent—University of California Service, San Francisco City and County Hospital, 1943-56.

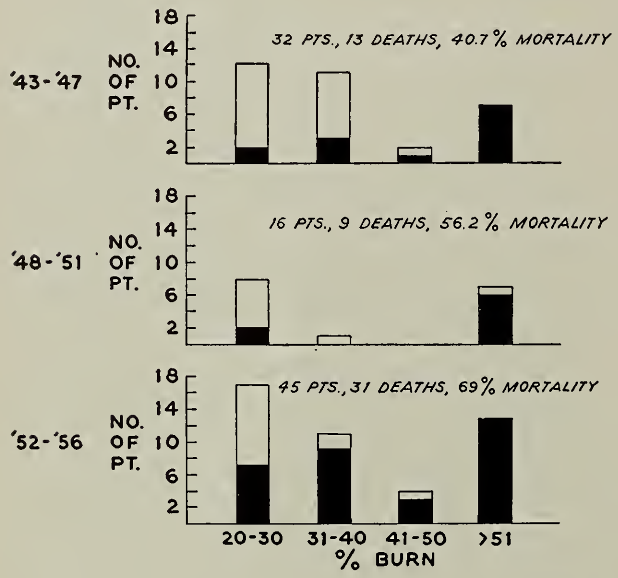

Chart 2.—Graph of mortality related to burn area, by time periods—University of California Service, San Francisco City and County Hospital, 1943-56. Each bar indicates the total number of patients burned in a specific category; the black portion indicates the number who died.

infection and other complications. As has often been pointed out, treatment of shock has advanced much further than has the ability to keep burned patients alive after the period of shock is over.

Trends in causes of death. Chart 4 shows the probable causes of death in patients who had burns covering more than 20 per cent of the body. The three arbitrary time periods are compared. Both the absolute and the relative numbers of deaths due to acute shock after being burned were lower in the later than in the earlier periods. In the first two

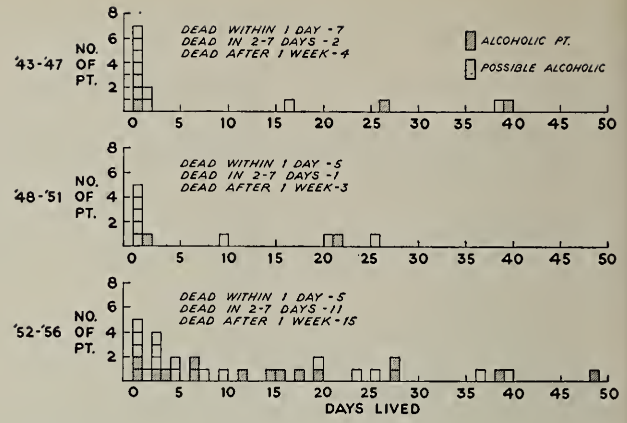

Chart 3.—Number of deaths related to number of days lived, with number of patients indicated, in cases of burns of more than 20 per cent—University of California Service, San Francisco City and County Hospital, 1943-56.

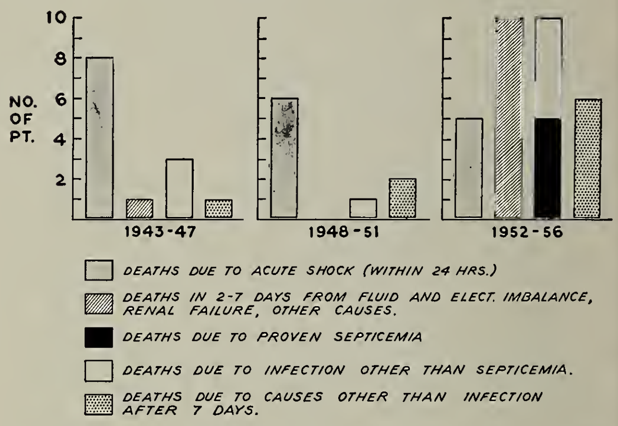

Chart 4.—Comparison, by time periods, of the causes of death in cases of burns of more than 20 per cent—University of California Service, San Francisco City and County Hospital.

periods, 69 per cent and 66 per cent of the deaths occurred within 48 hours of admission, but only six of the 31 patients, or 19 per cent, died within 48 hours of admission during the period 1952-1956.

The cause of death was fairly obvious for those patients who died in shock within the first 24 to 48 hours after admission, but it was difficult to ascertain the causes of late death. The cases of those patients who died between two and seven days after admission were arbitrarily grouped together, since the causes of death appeared similar: They apparently died of cardiac complications, acute renal insufficiency, or hepatic and renal changes. The cases of patients who died a week after admission from causes other than infection were grouped together: One died of gastrointestinal hemorrhage, one of renal insufficiency, one of aspiration pneumonia and six of vascular complications.

The cases of patients who died of infection were grouped together: Most of the deaths due to late complications occurred during the most recent time period in our series (Chart 4). It was not always easy to determine whether a patient had died as the result of infection. Our criteria for listing a case under this heading were one or more of the following: (1) Positive blood cultures for bacteria; (2) definite evidence of pronounced wound infection; (3) fever greater than 101° F. during the entire hospital course or for an extended period before death; (4) evidence at autopsy of serious infection, such as metastatic abscesses or multiple sites of encrusted pus.

In the most recent period (1952-1956), ten, or 33 per cent, of all deaths, was due to infection. Six of the ten patients died of septicemia, the diagnosis of which was established by blood cultures or by evidence of metastatic abscesses at autopsy. Four of the six patients who died of septicemia were children twelve years old or younger. The patients who died of infection were either very young or very old or were alcoholics. These three types of patients apparently have a diminished ability to combat the complications of burns. Most of these patients were severely burned. Only three received partial grafts before they died. With the exception of three cases, cultures were made from material taken from burned wounds. Multiple cultures were made from the wounds of most of these patients, and the results agreed.

As the infection progressed in these patients more antibiotics were administered (usually those that had *in vitro* effectiveness against the specific organisms cultured). An average of four kinds of antibiotics were administered to each patient who was dying of infection. In no case in which a culture of the blood became positive for a pathogenic organism did the patient live. The recent trend at the San Francisco City and County Hospital is reminiscent of that described in the study of Markley and coworkers[2] in Peru. In a period of four and a half years, Markley and co-workers treated 275 patients who had greater than 10 per cent of the body surface burned. Thirty-four (12.3 per cent) died of Pseudomonas septicemia.

Analysis of Possible Causes of Increasing Mortality

1. *Time of grafting.* Our first impression was that in the early years of the study, the patients received grafts earlier, with consequently better results. However, a review of the cases did not confirm this; the average time of the first graft in patients with a greater than five per cent, third degree burn remained about the same during the 14-year period.

The ratio of patients who received grafts as compared to the number who needed grafts (the latter arbitrarily defined as those patients with greater than 5 per cent, third degree burns) decreased in recent years. Two possibilities existed here: (1) Either the optimum time for grafting was missed and malnutrition and infection were permitted to deteriorate the patient's condition beyond the point where grafting could be done; or (2) the patients were never in a satisfactory condition for grafting. The latter appeared to be true. For example, in 1956, 11 patients had greater than 5 per cent, third degree burns; two of the patients received grafts and lived and three others died within a week. In five patients the infection became severe at a very early stage and they apparently could never have received grafts. Only one patient might have survived had more vigorous measures been taken and earlier grafting done.

Meeker and Snyder's method[3] of early dermatome débridement and grafting is now being used on the University of California Service in selected cases. A review of the cases mentioned previously leads us to believe, however, that their method could not have been applied in the cases in which infection was present and the patient critically ill in the period soon after he was burned.

2. *Increasing age of patients.* During the period that was under study, the number of elderly patients increased and the number of patients between 16 and 50 years of age greatly decreased (Table 1). This trend would affect mortality trends adversely and undoubtedly was related to the recent rise in the mortality of burned patients at the San Francisco City and County Hospital. Surprisingly, the proportion of children entering with severe burns did not change.

3. *Alcoholism.* Alcoholism did not seem to contribute more to one phase of mortality than to another. The number of alcoholic patients who died was evenly distributed all along the time-of-death graph (Chart 3). The same number of alcoholics or drug addicts was present in each treatment group; apparently alcoholism is not a factor in the recent increase in mortality.

Fifty-four per cent of all deaths in burned patients on the University of California Service occurred in definite or questionable alcoholics. Alcoholics are more likely to become burned than are people generally and they have decreased ability to survive trauma resulting from burns.

4. *Method of treatment.*

(a) *Closed as compared with open.* From 1943 to 1951 the wounds of burned patients were almost invariably treated closed, with compression bandages applied over xeroform or vaseline gauze. From 1952 to 1956 the wounds were nearly always treated open. Almost no local antibiotics were used. On the basis of the experience of other investigators, it is our impression that the differences in local treatment had little effect on mortality.

(b) *Supportive treatment.* The patients admitted during the first two periods, 1943 to 1951, received variable amounts of plasma during the shock phase. Little or no whole blood or electrolytes were given. From 1952 to 1956 the Evans Formula* was followed fairly closely. In the recent group, application of modern physiologic principles resulted in much improvement in survival rates during the period of acute shock. However, ability to keep the patients alive after the shock period has not improved, and the patients then die of sepsis or other complications.

(c) *Antisepsis.* The general measures for combating sepsis in burned patients remained about the same from 1943 to 1956. Burns were still treated on the open surgical ward or in side rooms, using sterile or clean techniques. The laundry of burned patients was not handled separately from that of other patients. Excretory receptacles were interchanged. Both burned and other surgical patients used the same dressing cart and bathtubs.

DISCUSSION

The only change in antiseptic technique was the increasing use of multiple, systemic antibiotics as prophylaxis and as definitive treatment, not only for the burned patients but for the surgical patients being treated on the same wards. During the period covered by this study there was an increase in resistant organisms and in serious and fatal infections due to organisms that were previously considered nonpathogenic or of very low virulence. Although increased age was a factor in the rising mortality rate among burned patients on the University of California Service, we believe the increasingly early infection in burned patients that is caused by organisms that are resistant to all antibiotics also played a prominent role.

The steadily increasing mortality rate in burned patients, primarily due to infection, would seem to warrant establishing a separate ward for these patients. Because of their greater susceptibility to infection, isolation techniques should be used. Hospital personnel assigned to this ward should not be permitted to care for other patients.

Since the use of antibiotics prophylactically has had no effect on the incidence of infection, these drugs should be reserved for therapeutic use.

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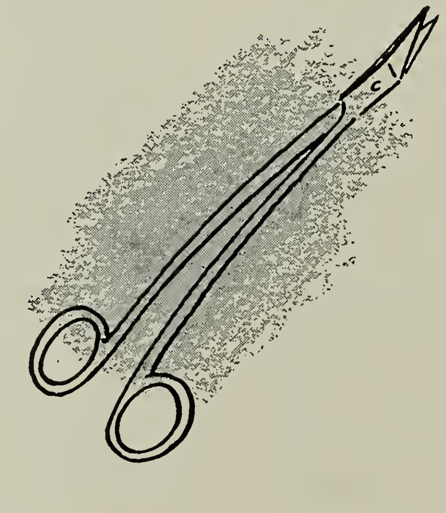

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*Evans Formula: (a) *For the first 24 hours:* Requirements for the first 24 hours may be estimated by the following formula: Per cent of body surface burned times weight in Kg. equals the number of cubic centimeters of plasma, plasma substitute and/or blood needed in first 24 hours.

An equal amount of isotonic saline should be administered, plus 2000 cc. of glucose in water. For example, the fluid requirements in the first 24 hours for a 70 Kg. man suffering a 35 per cent body burn can be illustrated as follows:

Plasma, plasma substitute, and/or blood (in cc.)=70×35=2,450 cc.
Electrolyte solution (0.9 per cent NaCl, in cc.)=70×35=2,450 cc.
5 per cent dextrose in water.................................. 2,000 cc.

Total required in first 24 hours..................... 6,900 cc.

(b) *For the second 24 hours:* Half the amount of fluid required in the first 24 hours is usually adequate to maintain the patient in good balance. Close observation of urine output and if possible of hematocrit will reveal exceptions, and the fluid ration should be altered as necessary.

Diagnosis of Schizophrenia in Young Children

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• Schizophrenia can be discovered in pre-school children by observation of: Social indifference; uneven and intermittent motor or physical development; irregularity in speech development with tendency toward infantile speech; early fear of falling or rising, giving way to obsession with jumping and falling; excessive interest in spinning toys and circular motility; and preoccupation with body periphery—hands, feet and hair.

When the physician observes these symptoms, or is consulted about them by the parents, clinical appraisal in consultation with a pediatric psychiatrist will usually suffice for diagnosis. Early treatment—before school age—is important for the child's future development.

Many investigators have noted that childhood schizophrenia is a more common condition than was formerly believed, and also that pediatricians or general physicians can diagnose the condition early in life.

The child's physician is the only one in a position to observe the early signs of the disease and it is to him that the parents describe the child's deviant behavior. Most often the assumption that "he will grow out of it" prevails, and it may not until the child enters school that his peculiarities demand attention.

By this time, unfortunately, the growing years have been to some extent wasted. An erroneous suspicion of brain disease may cause the child to be subjected to unnecessary procedures—ventriculography, perhaps, or even a brain operation. On the other hand, if an incorrect diagnosis of mental deficiency or cerebral palsy is made, parents are likely to infantilize the child, doing everything for him, stifling development to the point of complete dependency. Correct treatment then becomes impossible in most cases, even if the condition is diagnosed. In many instances, the diagnosis is never made and the child is relegated to an institution for the mentally retarded.[9,10,11,12]

What, then should make one suspect the presence of childhood schizophrenia? What are the signs and symptoms to be looked for in pediatric practice?

The earliest sign of childhood schizophrenia appears to be pronounced disinterest in interpersonal activities, called autism,[7] with interest in things rather than in people. Children of this kind live in their own world and are distressed if there is any change in their surroundings (such as new toys or different furniture arrangement).

If autism is not manifest, neurotic and pseudopsychopathic traits may appear: Some patients strive for body contact by the "clinging, melting" activity which some investigators consider an important clinical sign.[1] Many characteristically appear immature, psychologically and physically. Uneven development is common; delayed motor development or precocious speech may be noted by the physician at one visit and perhaps a complete reversal of this pattern at the next visit.[5] Language may be completely absent or fragmentary, with misuse of personal pronouns and repetitive echoing of speech. Memory can be excellent, sometimes even astonishing, with precocious ability to learn songs or telephone numbers. Speech frequently is extremely infantile in nature, with unusual voice inflections. Observations of physical growth shows these children to be at decided variance with the accepted norm for long periods, followed in some instances by periods of rapid development.

Sleep disturbances and lethargic states seem to be common, as are gastrointestinal and allergic phenomena. Vasomotor instability occurs in some of the cases, as evidenced by cyanosis of extremities and perioral pallor.[1]

Abnormalities in locomotion include graceful dancing activity as well as persistent toe-walking.[4] Early in life, many schizophrenic children are apprehensive about falling or rising, while at a later stage they may take obsessive interest in climbing up stairs or onto tables. When playing, they frequently turn themselves about in circles and are preoccupied with spinning toys or circular objects. If this spontaneous whirling is not apparent, a test is that many can easily be turned about the longitudinal axis. This phenomenon has been extensively reported[13] and has been stated to be the residual of the tonic neck reflex, the latter a supposed dominant postural pattern of schizophrenic persons under six years of age. Only after the age of six, however, is whirling significant, and then by itself is evidence, not of schizophrenia, but of central nervous system immaturity.

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Presented before the Section on Pediatrics at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

Schizophrenic children have a decided interest in space, time and motion. Hallucinations and delusions of the type noted in adult schizophrenics are rare; when voices are heard they are perceived as coming from within the chest, stomach or head, and are elicited by careful questioning. Preoccupations with the body periphery—hands, hair or feet[3] —are often outstanding and if not verbalized may be demonstrated by human figure drawings.

Attempts have been made to use the electroencephalogram and psychometric tests as aids in the diagnosis of childhood schizophrenia. It should be noted that electroencephalographic abnormalities have been reported in as many as 81 per cent of cases.[8] Asymmetric patterns, focal spiking and 3-second spike and wave formations are included in this category.[4] Hence, using the electroencephalograph as the sole aid in differential diagnosis, as is often attempted, is not trustworthy.

In general, it can be said that the reliability of psychological tests in infants and young children is comparatively poor.[6] They are only helpful in making gross distinctions between bright and dull children, but the child's future intelligence cannot be predicted. In the preschool schizophrenic child, psychometric testing may also indicate precocity in some activities and unexplained failure in others—features which can be noted in a careful clinical appraisal.

Experience has convinced the authors that it is paramount to establish the diagnosis as early as possible so that an appropriate treatment program can be planned. When a child's physician suspects schizophrenia he should immediately consult a pediatric psychiatrist and complete a total medical appraisal before making any definite statement to the parents. In most cases treatment must be thought of in terms of years rather than months, and in many, residential treatment is best.

University of California at Los Angeles Medical Center, Los Angeles 24 (Colbert).

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Social Security Footnotes

Social Security has been changed many times in the 22 years since the original law was enacted. The size and variety of benefits, the tax rates, the tax base, coverage—all have been radically changed. There is no reason to believe that another 22 years will not see just as radical changes.

—From the Department of Public Relations, American Medical Association

CASE REPORTS

Hyperthyroidism Associated with Presumptive Acute Pericarditis—A Report of Three Cases

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HENRY L. JAFFE, *M.D.*, Los Angeles

THE ASSOCIATION of hyperthyroidism and acute pericarditis is rarely reported in medical literature. Green and Hurxthal[2] listed one case of pericarditis in a data chart of associated findings in 469 thyrocardiac patients, but no further information about this case was presented. Levy,[4] in a review of 27 cases of acute serofibrinous pericarditis of undetermined cause, mentioned no instance of the association of hyperthyroidism with pericarditis. Brown[1] presented an excellent basic review of pericarditis but again there was no mention of any association with thyrotoxicosis. Furthermore, in personal communications from several authorities, a considerable difference of experience regarding the frequency of this association was noted.

Recently we observed three patients with hyperthyroidism associated with acute pericarditis. All three cases occurred in middle aged women. The pericarditis in each instance followed the symptomatic course of acute benign pericarditis of probable viral origin.* There were progressive electrocardiographic changes compatible with the patterns associated with pericarditis. Also in each instance the thyrotoxicosis was rather typical from the standpoint of signs, symptoms and laboratory confirmation.

REPORTS OF CASES

CASE 1. The patient was a 37-year-old white woman, who was first observed the morning after a night during which she became acutely ill with severe retrosternal pain of pressure type and dyspnea. She said that the illness started about an hour after the evening meal and then increased in intensity during the night.

The blood pressure was 125/80 mm. of mercury, the pulse rate 116 per minute, and there was a gallop rhythm; and a definite pericardial friction rub over the left parasternal area. The patient was obviously short of breath, in definite discomfort and appeared very restless and apprehensive. An electrocardiogram taken immediately was definitely abnormal, showing inverted T waves in Leads 1 and 2, AVL, and V3 to V6. The ST segments were iso-electric, slurring into the T wave inversions (Figure 1).

Admitted to hospital, the patient was given oxygen by mask and morphine sulfate to relieve the pain and restlessness. Moderate pain in the chest and shortness of breath continued, however. After two days, when the acute symptoms had subsided, the clinical appearance suggested thyrotoxicosis. The skin was warm and moist, there was persistent tachycardia and palpitation, tremor and extreme emotional tension; and the general demeanor was almost hypomanic. It was elicited that for the preceding two months the patient had had vague palpitations, tachycardia, shortness of breath, weakness and occasional vague pain in the chest. The pains at that time also seemed to occur after meals but were very mild and nothing like the rather severe pain which occurred at the onset of the acute illness. The patient stated that also during this period she had noticed increasing hunger and food intake, increased nervousness and tremors; and she said she had become very "warm-blooded." The patient had always been high-strung and emotional, but also during the period preceding acute illness these tendencies had become more evident.

Other physical signs suggesting exophthalmic goiter were: Tremor, a definite droop of the eyelids, persistence of the rapid pulse and the presence in the neck of a palpable diffuse goiter.

Serial electrocardiograms showed the ST segments of Leads V2 and V6 to become slightly elevated or iso-electric and the T waves to become more deeply negative. Q waves did not develop. X-ray films of the chest showed slight cardiac enlargement without any specific change in cardiac configuration.

Rarely did the body temperature not exceed 99.2° F. The leukocyte content varied from 4,100 to 6,700 cu. mm. and there was no increase in poly-

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*Although Coxsackie is the only virus so far isolated from some cases of "viral pericarditis," it is assumed that acute infectious pericarditis of the benign variety here referred to is of viral origin.

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Presented at the Regional Meeting of the American College of Physicians in Santa Barbara, February 23, 1957.

Submitted April 14, 1958.

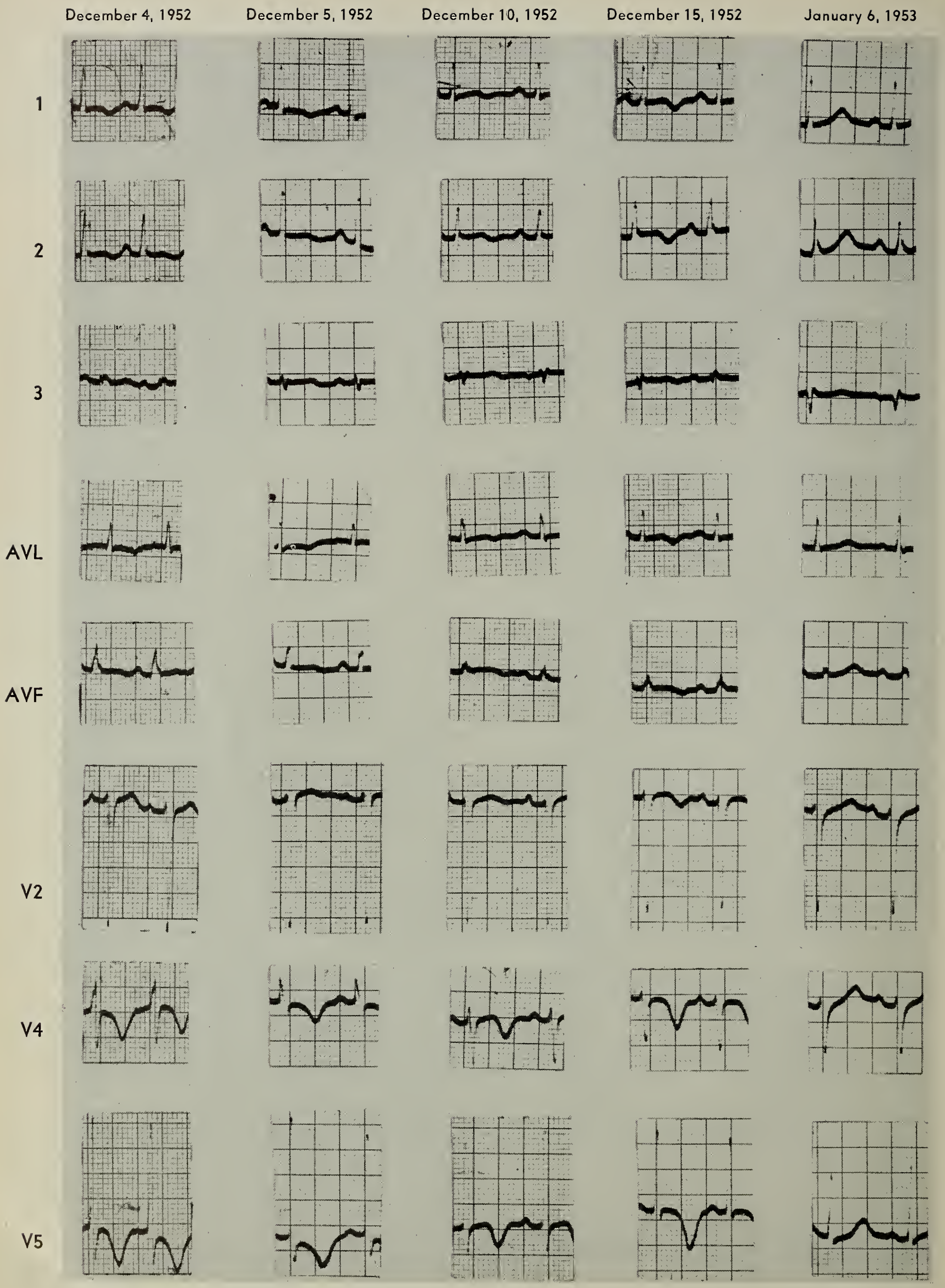
December 4, 1952
December 5, 1952
December 10, 1952
December 15, 1952
January 6, 1953
1
2
3
AVL
AVF
V2
V4
V5

Figure 1.—Electrocardiograms made at various times during illness and after recovery.

morphonuclear leukocytic cells. In fact, at one time lymphocytes made up 62 per cent of leukocytes. The Wintrobe sedimentation rate, 13 mm. in one hour on admission to the hospital, rose to 22 mm. three days later and then slowly decreased (it was determined at three-day intervals) to 12 mm. two weeks later.

These conditions of the blood and the electrocardiographic changes favored the diagnosis of acute pericarditis, rather than acute myocardial infarction, which had to be considered at first. The pericardial friction rub also favored the diagnosis of pericarditis in that it persisted on and off for ten to twelve days. Tachycardia also persisted. Blood plasma iodine content on the seventh hospital day was 10.8 gamma per 100 cc., and when determined again two days later it was 10.3 gamma per 100 cc. Radioactive iodine uptake 24 hours after a test dose of five microcuries was 76.6 per cent. The next day, therefore, an oral therapeutic dose of 5.45 millicuries of radioiodine was given. We felt that it was very important for the treatment of thyrotoxicosis to be started as soon as possible, because the toxic state was probably aggravating the pericarditis, and vice versa. Other therapy included bed rest, sedation, aureomycin, one gram per day in divided doses for six days, and oxygen on and off for shortness of breath and pain in the chest. Except for the several emotional crises, partly related to the stimulation by the thyrotoxicosis and the toxicity of the infection and partly related to the patient's tense and high-strung basic personality, the course was progressively favorable and one of improvement.

On the eleventh day (the fourth day after the therapeutic dose of radioactive iodine^{131}) the patient seemed particularly jittery and tense. Administration of Lugol's solution, 5 drops three times a day, was begun.

Two months after the first treatment dose of I^{131} was given, the radioiodine uptake was 52.8 per cent. An additional 3 millicuries of radioiodine was given orally. Three months later the I^{131} uptake was 42.2 per cent, and six months after the first treatment was given it was 35 per cent. At this time the pulse, which during the acute illness ranged from 90 to 104 per minute, was 72 per minute. One year after treatment the patient appeared well and had no complaints and the uptake of iodine was in the upper borderline range, 44.5 per cent. The electrocardiogram had returned to within normal limits.

CASE 2. The patient was a 50-year-old woman who was under treatment for hyperthyroidism. Before treatment with radioactive iodine^{131} was started for this patient, the protein-bound iodine content of the blood had been 11.5 gamma per 100 cc. and the radioactive iodine uptake had been 52 per cent. On October 29, 1952, the patient received a dose of radioactive iodine—the only one she received. She had been getting on fairly well and had been back at work for a few days when she first noted slight pain in the chest. That night and the next day she had a severe "crushing" substernal pain, radiating to the left side and back of the neck. 100 mg. of meperidine intramuscularly was required for relief. The pain persisted despite the administration of Empirin Compound with codeine, 30.0 mg. at intervals, for nine days. During this time the temperature had been slightly elevated each evening, up to 101.8° F., and then gradually subsided.

The patient was put in hospital. The maximum Wintrobe sedimentation rate was 35 mm. in one hour; and the rate then slowly decreased to 10 mm. in one hour in three weeks. The pulse was described as irregular, varying in both rate and rhythm. The patient was treated as having an intercurrent viral infection, and several injections of procaine penicillin were given. The heart rate became regular at 64 beats per minute. At the time of admission to the hospital a friction rub was heard all over the precordium, loudest at the base of the heart. This persisted for several days. The electrocardiogram was described as follows: "T1 negative; ST segment in Leads 2 and 3 slightly depressed with T in Lead 2 flattened; T in Lead AVR diphasic and flattened; T in AVL, negative; marked elevation of ST segment in Leads V1 and V2; T negative in V4 and diphasic in V5 and V6." Subsequent progressive changes in electrocardiograms were those of pericarditis. A week after admittance the electrocardiogram showed: "T waves were inverted in Leads 1, 2, 3 and AVF. The T in AVL was flat. ST segments were elevated in V3 and 4. The T was inverted in V4 and 6. Impression: Abnormal electrocardiogram consistent with pericarditis." One week later a tracing was reported as showing: "Less T wave inversion (almost iso-electric) than previously in Leads 1, 2, 3, AVF and V6. T wave inversion appears in V1 to 3. Impression: Abnormal electrocardiogram consistent with pericarditis."

The report on an electrocardiogram made three weeks after admittance to hospital was: "T waves are flat in Leads 1 and AVL and slightly inverted in Leads 2, 3 and AVF. There is slight terminal inversion of T waves in Leads V3 to 6. As compared with the last previous tracing, there is slight change in the T waves in Leads 1 and AVF, and the T waves of the precordial leads show less inversion. Impression: Abnormal electrocardiogram consistent with pericarditis. Improvement from previous tracing."

There was a Grade 3 systolic murmur, and the above described pericardial friction rub persisted for several days. Two roentgenograms of the chest, one taken ten days after admittance to hospital and the other two days later, showed an area of consolidation in the left upper lobe, probably an area of infarction. In addition, the films showed a slight amount of pleural effusion on the left side as well as a slight pericardial effusion. A film taken a week later showed improvement in the infiltration, but the cardiac shadow still was enlarged.

After radioiodine treatment the patient became relatively hypothyroid and required small doses of desiccated thyroid for maintenance. She no longer had pain, and when observed seven months later she looked well and said that she felt very well as long as she was taking 30.0 mg. of desiccated thyroid a day. The patient was in a euthyroid state and an electrocardiogram was within normal limits.

CASE 3. A 38-year-old white woman, when first observed, May 11, 1953, had severe precordial pain, radiating backward and into the left arm, of a week's duration. At other times she had had severe pain in the left side of the chest and under the sternum. She also said she had some dyspnea, excessive perspiration, more pronounced at night and palpitation.

When examined, the patient was apprehensive and very nervous, and complained of pain in both shoulders and the left precordium. The blood pressure was 120/80 mm. of mercury. The heart tones were hyperactive and there was definite tachycardia with an apical and radial rate of 116 per minute. There was a slight generalized hyperreflexia. Slight elevation of temperature was noted; usually it was about 99° F., on one occasion 100° F. The Wintrobe sedimentation rate, which was 8 mm. in one hour at the first examination, rose to a maximum of 20 mm. in one hour.

An electrocardiogram taken on May 13 was described as compatible with coronary heart disease or pericarditis, showing inverted T waves in Leads 2, 3 and AVF with slight ST elevation in AVL. At this time, the venous pressure was recorded as 7 mm. of water, the arm to tongue circulation time was 17 seconds, and the arm to lung circulation time was 6 seconds. Protein-bound blood iodine content was reported as 5 gamma per 100 cc.; two weeks later it was still at that level. On May 20 the pain in the precordium began to lessen and electrocardiograms, which were made serially, began to stabilize. The progressive changes in the electrocardiograms showed essentially progressive deepening of the T waves in Leads 2, 3 and AVF, without change in the QRS complexes, indicative of an acute myocardial process. On May 23, the electrocardiogram was within normal limits with upright T's in all leads, except 3, where the T wave had changed from inversion to diphasic. All of these T waves became upright, except the T in Lead 3, where the inversion became less.

On May 29 radioiodine uptake studies were carried out and the thyroid gland uptake was found to be 55 per cent. It has been observed that protein-bound iodine may be normal and the I^{131} uptake may be elevated in a certain number of patients with thyrotoxicosis.[3] The patient was given an oral treatment dose of radioiodine (I^{131}) of 2.73 millicuries on May 29, of 2.85 millicuries on June 1, and of 3.9 millicuries on June 9.

Response to radioiodine therapy was good, and by November the patient was able to resume normal activity. When last seen, some 11 months after she was first observed, she was euthyroid and the electrocardiogram was reported to be within normal limits.

DISCUSSION

It is believed that these three cases are worthy of reporting for several reasons. First, the coexistence of a benign (apparently viral) pericarditis and exophthalmic goiter with hyperthyroidism is apparently rare. The infrequency of this association suggests that it is only fortuitous. On the other hand, pericarditis, like any other infection or toxic process, might cause flaring of latent or low grade hyperthyroidism. Furthermore, it is known that resistance to infection in general is usually somewhat lowered in the hyperthyroid state.

Although myocardial complications with friction rubs and dull chest pain occur not infrequently in acute severe hyperthyroidism, well-documented instances of acute pericarditis with the usual course of electrocardiographic findings have not been described. In the three cases reported here, we believe it is fair to say that both conditions (hyperthyroidism and acute pericarditis) were probably associated. A conclusion as to whether this association was fortuitous or there was a more concrete relationship cannot be drawn from the evidence we were able to present.

Because of the paucity of literature on this topic, we decided to write to several authorities for their comments and experience regarding the association of hyperthyroidism and acute pericarditis. We received the following replies:

Arlie Barnes of Rochester, Minnesota, was the only cardiologist who remembered having seen several instances of acute pericarditis combined with hyperthyroidism. His comments were as follows:

"[I saw] great numbers of toxic goiter cases before the advent of iodine in the treatment of exophthalmic goiter. Not uncommonly I saw acute pericarditis in goiter patients, particularly with exophthalmic goiter, and it became so that it was one of the inflammatory complications that we were on particular watch for. We also saw frequent flares of tonsillitis in these patients. We assumed that both of these developments were indicative that their resistance to infection was greatly impaired in the presence of exophthalmic goiter. It was our opinion that the pericarditis encountered in these hyperthyroid patients ran a fairly benign course, although generally they ran the temperature up and were a source of worry and some [were] very sick patients. [Today] hyperthyroidism is nowhere near as toxic as it used to be. Iodine is frequently used early in controlling toxicity and the fact that pericarditis is not a rare complication of hyperthyroidism under present circumstances may make it desirable to make it known that even now the association is not too uncommon."

Paul D. White of Boston said:

"I . . . don't recall any such instance in my own experience. Hence, naturally since I have seen a good many cases of thyrotoxicosis and a good many cases of pericarditis, I would regard it probable that your three cases are coincidental. However, I cannot be so dogmatic as to say that such a related combination is impossible. Of course it is important to recognize two points, namely, that one may have so much activity of the heart in thyrotoxicosis that there can actually be sounds like a pericardial friction rub chiefly over the conus and pulmonary artery, and, secondly, with tachycardia in thyrotoxicosis the T waves can be depressed without any actual pericarditis."

Robert L. Levy of New York:

"I do not know of any instance of pericarditis associated with hyperthyroidism in which a direct relationship existed between the two conditions. It is difficult to see how thyrotoxicosis would cause a disturbance in the pericardial sac. The association in hypothyroidism, of course, is well known and has been commented upon in the literature."

Samuel Haines of Rochester, Minnesota:

"I haven't seen [the] association recently, but I do remember that many years ago I [saw at least a few such] cases. Whether the association was anything more than coincidental I never knew." "I have the impression that acute pericarditis, along with various other infections, may have been seen more frequently in the past than would have been expected, but this has not been noted by me recently."

Samuel A. Levine of Boston:

"I think that your experiences with acute pericarditis and thyrotoxicosis are rather unique. I recall seeing one such example years ago. It certainly is not a common combination amongst thyrocardiacs, as I have seen a good many masked thyrocardiacs without observing acute pericarditis. Acute rheumatic fever I have seen in patients who also had active hyperthyroidism."

Despite the apparent lack of reported cases and in spite of the limited experience (with one exception) of the consulted authorities with the association of hyperthyroidism and acute pericarditis, we believe the combined condition probably does exist more often than this evidence would indicate. It is hoped that our report will stimulate others not consulted to report their experiences. It was certainly true in our cases that the two conditions were mutually aggravating, and it was felt that because of this mutual potentiation of the two processes involved, these cases were ideal for prompt therapy of the hyperthyroidism with radioactive iodine. As a matter of fact, cases of hyperthyroidism with any infectious complication requiring prompt therapy without the risk of operation seem particularly amenable to this form of therapy.

SUMMARY

Three cases of hyperthyroidism associated with pericarditis have been presented.

No case reports of this association could be found in a review of the literature.

The three patients were treated with radioiodine^{131} and showed a favorable response.

Personal communications from five authorities from the fields of cardiology and thyroid disease showed (with one exception) infrequent experience with the combination or association of these two disease entities.

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Phlebothrombosis of Subcutaneous Tissue Of Breast (Mondor's Disease)

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MONDOR'S DISEASE was observed by Flagge in 1869 and described as follows: "Anyone familiar with the contents of our museum will remember this model of the breast which presents a deep, puckered groove, looking exactly as if it were a scar after an operation for the removal of the organ and extending into the axilla." Fiesinger and Mathieu in 1922, Faure and Sedallian in 1929 and Huc in 1930 described a disease similar in identity. In 1931 Williams, and in 1932 Daniels, published reports of several cases resembling this disease. However it was not until 1939 that Henri Mondor, a French surgeon, first described the disease entity which bears his name. He reported cases he had observed and collected reports of several others. Leger, in 1947, collected reports of 22 cases from the literature and discussed the etiology, symptoms, pathologic features and treatment. In a recent review of the American literature I was unable to find any additional information on this syndrome.

The incidence of the disease is highest in women between the ages of 21 and 55 years. The lesion begins as a cord-like band adherent to the skin and subcutaneous tissue with retraction of the skin giving it the appearance of a groove. This cord-like

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Submitted May 9, 1958.

structure is usually 20 to 30 cm. long. It is noted more frequently in the left breast. The onset is insidious and no definite etiological factors have been demonstrated. Some pain is present. From the gross appearance and location of the lesion, the patient usually suspects cancer. The lesion is benign, and the regional lymph nodes are not involved. Total excision of this structure is simple and should be encouraged, for the lesion is fixed to the skin and is often mistaken for carcinoma.

Following is a report of a case observed by the author:

REPORT OF A CASE

The patient was a 45-year-old white married woman, first observed December 19, 1957, because she feared cancer of the left breast. Three weeks earlier she had noticed some pain and discomfort of the left breast, especially on raising her arm above her head.

Upon examination a rubbery mass near the nipple of the left breast and firmly adherent to the skin was noted. From this point laterally toward the axilla, a cord-like structure was palpated as far as the axilla, where it disappeared under the lateral border of the pectoralis major muscle. A characteristic groove appeared when the arm was raised. The cord was not particularly tender. The heart and lungs were clear to auscultation. The blood pressure was 120/78 mm. of mercury. Results of urinalysis were within normal range. No abnormality was seen in an x-ray film of the chest. Protein-bound iodine content of the blood was within normal limits. The lesion was excised.

Pathologist's Report

The nodule in the skin and subcutaneous tissue was composed of a thrombosed vein with partial organization. The thrombus was infiltrated by many fibroblasts and macrophages. The bordering tissue contained a small nerve trunk and showed proliferation of fibrous tissue with some macrophage infiltrate. Sections taken from the subcutaneous tissue at a distance from this nodule showed a mass of proliferating fibrous tissue consistent with an obliterated vein.

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Neurofibrosarcoma of the Stomach

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NEUROFIBROMAS OF THE STOMACH are not extremely uncommon, but the sarcomatous variety is a rarity. Minnes and Geschicter,[9] in a review of a series of 931 benign gastric tumors, noted that 10.9 per cent of them were neurofibromas. In a search of the literature of the last 25 years, reports of only 12 cases of sarcomatous neurofibroma were found.* However, it must be recognized that confusion in terminology and the differences of opinion among pathologists in interpretations of the several types of gastric tumors of neurogenic origin make the total number of reported cases of any one type difficult to determine.

Ransom and Kay[11] presented a good working classification of abdominal tumors of neurogenic origin. It is to be noted, however, that almost all of these tumors of the stomach are either neurilemmomas or neurofibromas. Each may also occur as a malignant lesion.

Neurofibromas originate from both the Schwann cells of the nerve sheath and the fibrous tissues of the perineurium, whereas neurilemmomas are considered to originate only from the neurilemma or Schwann cells.[11] Ransom and Kay said that it is the hyperchromatic spindle cells which indicate the neurogenic origin of these tumors. Canney[3] described the palisading arrangement of the elongated neuclei in neurilemmomas, as contrasted with the formation of interlocking strands of spindle cells in neurofibromas. Differentiation between these two varieties of neurogenic tumors may still be most difficult. Because of this difficulty, Canney expressed belief that neurogenic tumors of the stomach are often reported in the literature as neurofibromas when they conform in fact to the neurilemmoma group. In addi-

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*References 1, 2, 4, 5, 6, 7, 10, 11.

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tion, the dividing line between benignancy and malignancy is at times somewhat arbitrary.

Canney further pointed out that leiomyomas, which are similar clinically, radiographically and grossly, are easily confused with neurogenic tumors on microscopic examination. Mallory[2] also mentioned this difficulty in differentiation and surmised that many pathologists are content with a diagnosis of spindle cell sarcoma rather than to try to distinguish between myomatous and fibromatous tumors of neurogenic origin.

Grossly neurogenic tumors may occur as a combined intragastric and extragastric lesion, forming an hourglass configuration. An ulcer is usually present on the summit of the mucosal surface. The serosal surface appears smooth with variable degrees of nodularity. On cut surface, areas of hemorrhage and necrosis are usually seen.

Canney observed that benign neurofibromas of the stomach are almost always associated with Von Recklinghausen's disease and have a greater tendency to malignant change than do neurilemmomas. It was emphasized, however, that the grade of malignancy is not high and metastasis is uncommon.[7]

The clinical manifestations of neurogenic tumors, both benign and malignant, are similar. Because of mucosal ulceration which invariably results, hemorrhage is a constant symptom, manifest as melena or hematemesis or both. Vague abdominal discomfort or ulcer-like pain is usually present.

A wide gastric resection is the operation of choice, and usually results in cure, owing to the infrequency of metastasis.

REPORT OF A CASE

A 52-year-old white man was well until July 3, 1954, when he noted moderate epigastric discomfort with no radiation of the pain. Later that day he passed a black stool. The pain persisted to some degree for five days, occasionally being so severe as to awaken him from sleep. The stools continued to be black and on the fifth day of illness moderate hematemesis occurred. The patient then consulted a physician because of severe weakness.

The hemoglobin was 5.5 gm. per 100 cc. of blood and the hematocrit was 18 mm. The patient was immediately put in hospital. The only significant factor elicited in history taking was a single episode of passing a very black stool a year previously.

Upon physical examination, the patient appeared to be in shock. There were no abdominal masses or other localizing diagnostic findings.

The diagnosis upon admittance to hospital was probable bleeding peptic ulcer.

After a transfusion of 1000 cc. of whole blood the hematocrit rose to 23 mm. and the patient showed recovery from shock. Complete bed rest and a Sippy No. 2 diet were prescribed. An additional 500 cc. of whole blood was given on July 9, on July 10 and on July 11, 1954. The stools became brown, and by July 13 the hematocrit had risen to 36. On July 14 roentgen examination of the upper gastrointestinal tract was carried out. There was deformity of the duodenal bulb without evidence of crater, and in addition there was what appeared to be an irregular filling defect high on the lesser curvature of the stomach. The x-ray study was repeated on July 16, and the filling defect was then more apparent. It was 10 cm. in diameter and contained a 10 mm. fleck of barium, suggestive of an ulcer crater (Figure 1). On July 17, gastroscopy clearly revealed a large tumor mass arising from the midbody of the stomach along the lesser curvature. Two distinct ulcers were seen on the surface of the mass, each filled with a blood clot. The remainder of the rounded mass was covered by smooth gastric mucosa. On July 21, partial gastric resection was done. The preoperative diagnosis was probable leiomyoma of the stomach.

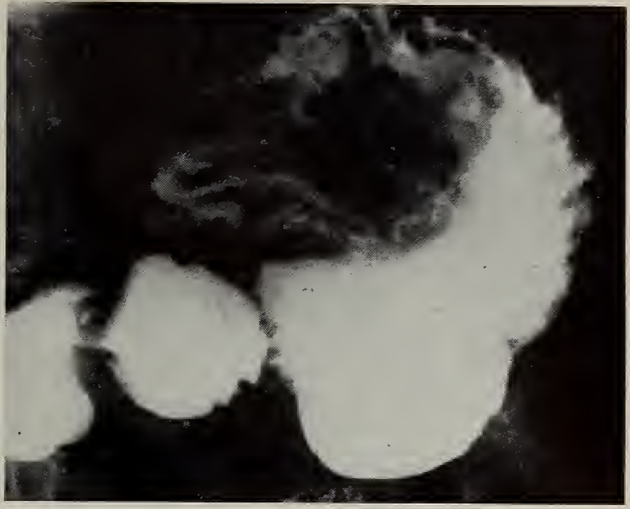

Figure 1.—X-ray film of stomach, showing large filling defect.

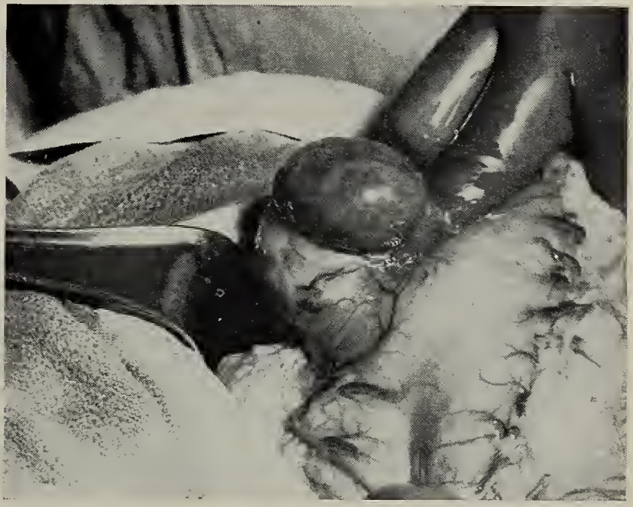

Figure 2.—Large tumor mass arising from anterior wall of stomach.

The patient made complete and satisfactory recovery and was discharged from the hospital on the tenth postoperative day. He returned to his regular job as a business machine repairman five weeks later and at last report some three years later had

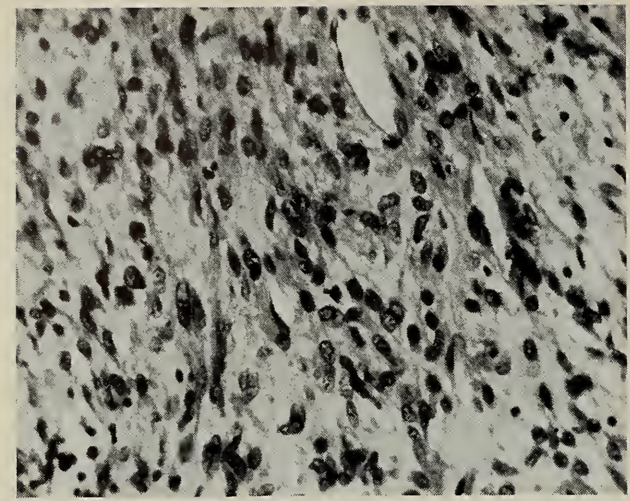

Figure 3.—Photomicrograph showing neoplastic spindle cells (×500).

not lost any time from work through illness. Roentgen examination of the upper gastrointestinal tract was done every six months and there was no evidence of recurrence.

Pathologist's Report

The tumor, a gray-red bosselated mass 9x6x3 cm., showed numerous hemorrhagic foci (Figure 2). On the mucosal surface there were several ulcerations about 1 cm. in diameter. Microscopically the tumor was composed of organized masses of neoplastic spindle cells forming ill-defined lobules and showing areas of edema. It was well vascularized. Numerous atypical spindle cells containing abundant blue cytoplasm and from one to three nuclei were noted in some foci. The tumor penetrated muscle bundles of the stomach and was covered by thin connective tissue on the serosal aspect (Figure 3).

Since there is a lack of agreement among pathologists regarding the classification of these neoplasms the slides were reviewed by several outstanding pathologists. The consensus was that the tumor was a neurogenic neoplasm of the stomach, best classified as a neurofibrosarcoma.

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EDITORIAL

The Inimical Changes in "Medicare"

Revisions being made by military authorities in "Medicare," a program under which medical care has been supplied by private practitioners to dependents of members of the uniformed services, are destroying some of the very features which once made the plan acceptable to the medical profession.

The plan that was accepted was one in which there was a minimum of regimentation either of patient or physician. The plan as it is now being changed—ostensibly in the interest of economy to stay within a Congressional limitation of funds for the program—will deprive many of these patients of free choice of physician and will offer them only care by military personnel in military hospitals.

Moreover, there appears to be a willingness in military circles to make opportunistic use of these revisions in such a way as to divert into military channels some of the teaching functions traditionally carried out by private hospitals.

Under the new appropriation bill approved by Congress, a top limit has been placed on Medicare funds. To stay within this limit, military authorities have changed the eligibility rules of the program, so that private facilities will, in effect, be available only to the wives and children of military personnel who are domiciled away from the post or home port of the military sponsor or who may be located with the sponsor in a remote area where adequate military medical facilities are not available.

It is still too early to know what effect these restrictions will have but it is obvious that in areas such as San Francisco and San Diego, where military forces are large and military hospitals are similarly large, the referral of military dependents to civilian physicians will dwindle considerably, if not disappear completely.

When medical leaders accepted the Medicare plan some 18 months ago, they agreed to do so principally on the strength of the following considerations:

(1) Assurance to military personnel that their dependents would receive medical care would be a strong factor in the morale of the armed forces, and therefore of benefit to the nation.

(2) Under Medicare as it was before the present changes, these dependents had free choice of physicians, a feature which brought about the treatment of a great majority of them within the framework of private practice rather than as regimented patients in military hospitals.

(3) Putting the care of military dependents largely in the hands of physicians in private practice eliminated the need for continuing the doctor-draft law, a discriminatory statute which provided for enforced military service for physicians up to age 50. (Other citizens may be drafted only to age 26.)

Now, in an about-face, the morale factor has been damaged and physicians again face the possibility of being drafted into military service, where they will again be called upon to care for civilians. Already Washington authorities are referring sadly to the impending need of resuming the doctor draft.

As to how the diversion of military personnel dependents into armed forces hospitals can impinge upon traditional means of medical training, it is interesting that military officers have complained that the availability of private medical and hospital services to military dependents under Medicare has adversely affected the teaching programs in their hospitals by reducing the clinical material available.

This claim raises a basic question which one day will demand a straight answer. The question: What is the true objective of hospitals owned and operated by the federal government?

Hospitals traditionally have been considered as quarters for sick people while receiving special medical treatment and care that could not be given to them otherwise. This is true whether the hospital is government-owned, non-profit private or proprietary. Where a hospital is part of a medical school or affiliated with such a school, it serves the dual purpose of supplying these special services and providing teaching facilities for undergraduate or graduate medical students. This set-up is ingrained in our medical teaching programs and is thoroughly understood by all.

In recent years the federal hospitals operated by the Army, Navy, Air Force and Veterans' Administration have enlarged this concept and put themselves in the position of being essential teaching units, purportedly as a means of improving the training of their own medical officers. It is easily understandable that military officials are sincerely interested in securing more extensive training for their staff physicians. But such training can be secured through the numerous private hospitals all over the country which today have a shortage of residents in all branches of medicine. With surplus residencies in private institutions, why should government add to the total of available residencies by setting up training programs of its own? In so doing, government adds to the vicious cycle of assuming the care of more patients, securing physicians to provide the care, building more beds to handle the patients, using the patients as teaching material and drafting more physicians as clinicians and teachers.

All in all, the changes in Medicare would seem to destroy a great deal that was good in the plan and at the same time, whether fortuitously or by craft, extend the areas in which government medicine can infringe on private practice.

Relative Values—A Restudy

THIS MONTH the members of the California Medical Association will be asked to participate in a restudy of the Relative Value Study with which all are familiar. Each member will be sent a work sheet and be asked to indicate on it the fees he normally charges for procedures used in his practice.

This study will bring up to date the original Relative Value Study and eliminate any inequities which might be found from the first inquiry of 1954.

California's Relative Value Study started out as an internal inquiry on the feasibility of expressing professional fees in terms of units, the units reflecting the relative worth of one procedure as against another. By the time the study was completed it became evident that such a study would have a wide range of usefulness and this has been borne out by experience. Not only their professional colleagues but many other persons and organizations who deal with medical fees are greatly in debt to the C.M.A. Committee on Fees for carrying out this outstandingly successful project.

Many physicians have established fees in their own offices on the basis of the values shown by the original study. Insurance companies have used it as a base for calculating indemnity tables. The Medicare program grasped the opportunity to use the California study as a pattern for negotiating fees with state medical association representatives. Simultaneously, the study has been most productive in establishing a nationally accepted nomenclature and a coding system for the hundreds of procedures encompassed.

The restudy at this time will reevaluate the 1956 production. It will also give physicians an opportunity to add new procedures to the lexicon or discard outmoded ones.

Copies of the work sheet will be sent direct from the California Medical Association office or through the offices of county societies which wish to handle their own distribution and add their own suggestions. Replies will come to the California Medical Association, where IBM equipment will be available for tabulating the hundreds of thousands of items included in the entire study.

Members are asked to read the general instructions printed on the inside front cover of the work sheet. They are especially requested to note on the front cover of the sheet the county in which they practice and the field of practice they follow. On the inside pages they are to list their own ideas as to the fee applicable to those procedures which they regularly perform. By concentrating on such usual items, urologists, say, will not be expressing their ideas on the fees an ENT specialist should receive, and vice versa.

Deadline for receiving completed work sheets has been set for October 31. Following that date the mechanical tabulating will be done. By handling much of the first mailing through county societies, it will be possible to provide the counties with the tabulated returns from their own areas.

Officers of the California Medical Association are hopeful that the members of the association will cooperate in this survey as they did in the first study. In so doing they will directly serve themselves and their medical association and will smooth relations and negotiations with all the public and private agencies with which organized medicine has dealings that involve fees.

Letters to the Editor . . .

Editor, California Medicine:

There is considerable confusion in commonly accepted terms and advice in your recent abstract "Treatment for Port-Wine Birthmarks."*

The accepted dermatologic concept of the term "port-wine stain" is that of a definite purplish permanently established, nonelevated vascular change in the skin. Such lesions do not respond well to anything short of surgical excision, plastic surgery, although some success has been claimed and noted following grenz ray therapy and thorium X varnish.

"Strawberry or raspberry marks" are the commonly seen rather bright red, elevated, often growing birthmarks. They respond excellently to refrigeration, radium or excision. They could also be destroyed with electrodesiccation but probably with more scarring.

Judging by forty years of experience with electric desiccation, I would say that it is not a good treatment for "Port-Wine Birthmarks."

Harry J. Templeton, M.D.

* * *

Editor, California Medicine:

How can radiologists assure the patient that they are making all-out efforts to limit x-ray exposure, when eminent chest physicians continue to fluoroscope patients on a weekly basis.

Perhaps they do not realize that a 2-minute fluoroscopy of the chest requires approximately 40 times more x-ray exposure than a film study of the same part.

We have an ethical responsibility to our patients who are very concerned about any radiation dangers that might be eliminated.

Sincerely yours,

Hugh A. Cregg, M.D.

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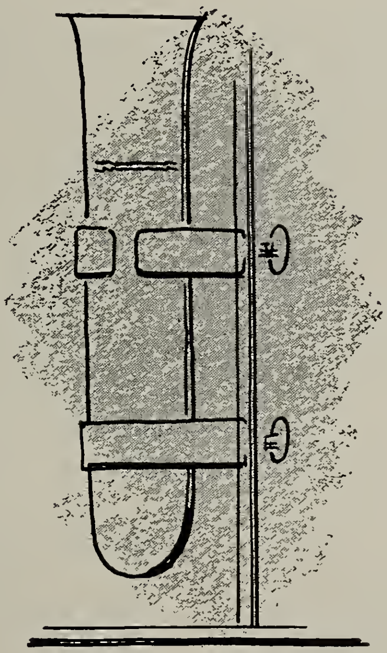
*Abstracted from *Archives of Dermatology,* May, 1958, and published on Advertising Page 50, California Medicine, July, 1958.



California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

437th Meeting

Tentative Draft: Minutes of the 437th Meeting of the Council, San Francisco, Sheraton-Palace Hotel, June 23, 1958.

By special call of the chairman, in accordance with the provisions of the By-Laws, the Council met in Room 2014 of the Sheraton-Palace Hotel, San Francisco, on Monday, June 23, 1958, at 5:30 p.m.

Roll Call:

Present were President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron, Editor Wilbur and Councilors MacLaggan, Wheeler, Foster, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Davis, Sherman, Lum, Bostick and Teall. Absent for cause, President West, Secretary Daniels and Councilors Todd and Harrington.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Clancy, Gillette and Whelan of C.M.A. staff; county executive secretaries Geisert, Rosenow, Pettis, Field, Foster and Nute; and Doctors Henry Gibbons III, Robertson Ward, John Rumsey, A. A. Morrison, D. A. Charnock, Francis J. Cox, Eugene F. Hoffman, John W. Cline, J. Lafe Ludwig, J. J. Crane and Frank A. MacDonald.

1. *Medical Care for Military Dependents:*

Chairman Lum announced the purpose of the meeting as a discussion on the advisability of the Association's sending one or more representatives to Washington, D. C., to place before a subcommittee of the U. S. Senate Committee on Appropriations the views of the Association on a proposed reduction in the budget which would decrease funds available for the "Medicare" program and would limit or eliminate the right of the military dependents to exercise free choice of physician.

Mr. Whelan reported on a visit he had made to Washington, during which he was assured that a representative of the Association would be permitted to appear before the subcommittee.

Doctor John Rumsey read, paragraph by paragraph, a statement which had been prepared for presentation to the subcommittee in the event an Association representative were authorized to appear. Discussion was held on each section of the proposed statement, which based the Association's objections to the proposed budget reduction on the resultant disallowance of free choice of physician by military dependents. After discussion and amendment, on motion duly made and seconded, the statement was approved as representing the Association's point of view.

Following additional discussion, on motion duly made and seconded, it was voted that Doctor Rumsey be authorized to appear before the subcommittee of the U. S. Senate Committee on Appropriations and present the statement as adopted. It was recognized that questions beyond the scope of the statement might be asked of Doctor Rumsey as a witness and it was agreed that his replies to such statements should be based upon the concept of free choice of physician by the patient.

FRANCIS E. WEST, M.D. . . . . President
T. ERIC REYNOLDS, M.D. . . . . President-Elect
JAMES C. DOYLE, M.D. . . . . Speaker
J. NORMAN O'NEILL, M.D. . . . . . . Vice-Speaker
DONALD D. LUM, M.D. . . . . . . Council Chairman
ALBERT C. DANIELS, M.D. . . . . Secretary-Treasurer
IVAN C. HERON, M.D. . Chairman, Executive Committee
DWIGHT L. WILBUR, M.D. . . . . Editor
JOHN HUNTON . . . . Executive Secretary
General Office, 450 Sutter Street, San Francisco 8

ED CLANCY . . . . . . Director of Public Relations
Southern California Office:
2975 Wilshire Boulevard, Los Angeles 5 • DUnkirk 5-2341

The negative votes of Councilors Wheeler, O'Connor, Pearman and Teall were recorded on this motion.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 6:30 p.m.

Donald D. Lum, M.D., *Chairman*
Albert C. Daniels, M.D., *Secretary*

* * *

438th Meeting

Tentative Draft: Minutes of the 438th Meeting of the Council, Los Angeles, Ambassador Hotel, July 12, 1958.

The meeting was called to order by Chairman Lum in the Colonial Room of the Ambassador Hotel, Los Angeles, on Saturday, July 12, 1958, at 10 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron, Secretary Daniels and Councilors MacLaggan, Wheeler, Todd, Foster, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Harrington, Davis, Sherman, Lum and Teall.

Absent for cause, Councilor Bostick and Editor Wilbur.

A quorum present and acting.

Present by invitation were Messrs. Thomas, Clancy, Gillette, Whelan and Collins of the C.M.A. staff; Messrs. Hassard and Huber of legal counsel; Ben Read and Eugene Salisbury of the Public Health League of California; County Medical Society Executives Scheuber of Alameda-Contra Costa, Rosenow of Los Angeles, Field of Los Angeles, Bannister of Orange, Marvin of Riverside, Foster of Sacramento, Donmyer of San Bernardino, Nute of San Diego, Neick of San Francisco, Thompson of San Joaquin and Donovan of Santa Clara; Doctors A. E. Larsen and William Gardenier and Messrs. Paolini, Dore and Webb of California Physicians' Service; William Rogers of the California Academy of General Practice; Doctor Fritz Krietie of the State Department of Public Health; Dr. John Keye of the State Department of Social Welfare; Doctor Dan O. Kilroy, chairman of the Commission on Public Policy; Doctor Homer Pheasant, chairman of the Committee on Insurance, and others.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 436th meeting of the Council, held June 7, 1958, were approved.

On motion duly made and seconded, minutes of the 437th meeting of the Council, held June 23, 1958, were approved.

2. *Membership:*

(a) A report of membership as of July 9, 1958, was presented and ordered filed.

(b) On motion duly made and seconded, 181 delinquent members whose dues had been received were voted reinstatement.

(c) On motion duly made and seconded in each instance, 11 applicants were voted Associate Membership. These were: Yrech Pardo, Alameda-Contra Costa County; Ralph W. Alexander, Bernard J. Haverback, Jacques Nowack, Benjamin Samuel, Robert M. Schumann, Los Angeles County; Zuleika Yarrell, San Bernardino County; Thomas R. Fowler, Harry B. Friedgood, Robert W. Jerner, San Francisco County; Richard Barr Jones, Stanislaus County.

(d) On motion duly made and seconded in each instance, three applicants were voted Retired Membership. These were: Francis A. Walls, Los Angeles County; Rachel Gorb, San Francisco County; Grace Gunn Binger, Santa Clara County.

(e) On motion duly made and seconded in each instance, five members were voted a reduction of dues because of illness or postgraduate study.

3. *Financial:*

(a) A report of bank balances as of July 9, 1958, was presented and ordered filed.

(b) Dr. Sherman reported on the purchase of the blood bank note for a total amount of $65,000 plus interest at 3 per cent for the period of December 1, 1957, through June 15, 1958.

On motion duly made and seconded it was voted to offer the Central Valley Blood Bank the note at the cost to the C.M.A. (It was recommended that if Central Valley Blood Bank does not purchase, the full amount plus interest be collected, inasmuch as the Association assumed the financial risks involved in the transaction. However, it was also voted that any gain realized on this transaction be held solely for blood bank uses.

(c) On motion duly made and seconded it was voted to accept the recommendations of the Finance Committee that a maximum of $2,000 be carried over from the 1957-1958 budget of the Medical Review and Advisory Board for completion of the present hospital study and that no funds be carried over into the new fiscal year for the University Planning Program.

4. *Commission on Medical Services:*

Doctor Harrington, chairman of the Liaison Committee to the State Department of Social Welfare, reported on the recent meetings of this committee. He stated that the Welfare Department believed it too early to reach a decision on the pilot study with respect to eliminating the prior authorization requirement statewide. At the next meeting of the Advisory Committee to the State Welfare Board there will be a complete review of the results of the study. Dr. Harrington commented on the drug problem with respect to the public assistance medical care program and stated that his committee had the following three steps under consideration as a method to assist in the solution of this problem. (1) The committee is to set up a separate committee for the study of this problem in detail. (2) To ask the county medical societies to discuss this problem at joint meetings. (3) To ask C.P.S. to screen drug bills more closely.

Doctor John Keye, Medical Director for the State Department of Social Welfare, reported that more than 52 per cent of the monies expended under the program is going for drugs and requested a meeting with the C.M.A. representatives to discuss this problem.

On motion duly made and seconded it was voted to refer the request of Doctor Keye to the Liaison Committee and to request the committee to work with the Public Relations Committee and to report back to the Council before any action is taken.

Doctor Harrington reported on the Pilot Programs proposed by San Mateo, Santa Clara and Orange County Medical societies. These studies are under consideration by the Welfare Department.

Doctor Harrington suggested that consideration be given to a pilot study on hospitalization for OASI recipients whereby factual information could be obtained on where these recipients are located, the utilization of the hospital facilities and whether or not this group could use this type of prepaid hospital insurance. He further suggested that this might be a joint effort with the A.M.A. and possibly Blue Cross.

5. *Commission on Medical Education:*

Doctor Daniels presented the report of the Commission on Medical Education in three parts.

a. *Committee on Maternal and Child Care.* The Committee on Maternal and Child Care has recommended that investigators for the Maternal Mortality and Perinatal Mortality studies be board certified OB/GYN or Pediatricians and limit their practice to the respective fields.

On motion duly made and seconded, it was voted to refer this recommendation back to the Committee on Maternal and Child Care for further study and consideration in view of local situations and other factors involved.

It was recommended that appropriate legislative steps be taken to eliminate the present requirement for footprints on birth certificates inasmuch as this practice is unnecessary and of doubtful use.

On motion duly made and seconded, it was voted to ask the Legislative Committee to draft appropriate legislation to eliminate this present requirement.

The committee requested funds to undertake a joint study with the State Department of Public Health on Erythroblastosis Fetalis. Following discussion on the current status of investigative reports with respect to legal immunity, on motion duly made and seconded, it was voted to table the study on Erythroblastosis Fetalis until legal matters can be resolved and to request the committee to delay action on the study at this time.

On motion duly made and seconded it was voted to request of the Legislative Committee that appropriate legislation be reintroduced in 1959 to protect these investigative studies.

b. *Committee on Postgraduate Activities.* Doctor Daniels reported that the cost of the postgraduate institutes had increased due to the panel type of program being featured.

On motion duly made and seconded, it was voted to set the fee at $25 for each postgraduate institute.

c. *Committee on Medical Education and Hospitals.* Doctor Daniels presented a report of the committee on two resolutions, No. 15 and No. 21 of the 1957 House of Delegates.

On motion duly made and seconded it was voted to refer these resolutions to the Commission on Medical Services for study and definitive action. The commission was urged to invite authors of resolutions to discuss them.

6. *Commission on Professional Welfare:*

Doctor Kirchner reported on the Commission on Professional Welfare as follows:

Committee on Insurance. Doctor Homer Pheasant, chairman of the Committee on Insurance, requested clarification on the request of the Council to study major medical problems.

On motion duly made and seconded, it was voted to request the Committee on Insurance to secure bids based on specifications from a number of sources, to report back to the Council and to obtain the recommendations of the Medical Executives Conference.

On motion duly made and seconded, it was voted to empower the Committee on Insurance to employ an independent insurance consultant if necessary.

Doctor Pheasant reported on a travel insurance program and a bid received on it. On motion duly made and seconded it was voted to accept the offer for travel insurance at a rate of 25 cents per thousand dollars with a maximum of $50,000 coverage, for all members of the Council, employees, committee members and county executive secretaries who travel on C.M.A. business.

7. *Commission on Public Policy:*

Doctor Kilroy reported as follows:

a. The California branch of the American Academy of Pediatrics has requested that a section be added to the business and professions code whereby a section on pediatrics would be included in the licensing examinations.

On motion duly made and seconded it was voted to request the Committee on Legislation to prepare appropriate legislation endorsing this principle after consultation with others.

b. The House of Delegates in the adoption of the report of Reference Committee 3A requested that an effort be made to have a physician appointed to the State Board of Social Welfare.

On motion duly made and seconded, it was voted to instruct the legislative committee to request that a physician be appointed to this board.

c. *Interdepartmental Fee Schedule Study Committee.* Doctor Kilroy reported on the progress being made by the interdepartmental fee schedule study committee.

On motion duly made and seconded it was voted that the legislative committee be empowered to consult with the interdepartmental fee schedule study committee and other state officials regarding the development of future fee schedules for state medical care programs.

Messrs. Ben Read and Eugene Salisbury reported on the hearings of the Senate Interim Committee on Social Welfare concerning the Association's efforts to have AB 679 repealed.

On motion duly made and seconded, it was voted that this Council request the legislative committee to continue its efforts and to do everything possible in its judgment and knowledge to bring about the repeal of AB 679.

Chairman Lum read two letters from the President of San Diego County Medical Society commending the efforts of Doctors Harrington and Kilroy.

8. *Judicial Commission:*

On motion duly made and seconded, it was voted to reappoint Arlo A. Morrison to succeed himself and Albert E. Long, M.D., of San Francisco, to replace Albert C. Daniels, M.D., whose term has expired.

9. *Resolution of the Palomar Hospital Staff:*

Discussion was held on the resolution submitted by the Palomar Hospital Staff regarding malpractice.

On motion duly made and seconded, it was voted to refer the resolution to the Medical Review and Advisory Board for consideration; the board's recommendations to be sent to the Palomar Hospital Staff.

10. *Los Angeles County Medical Association:*

Edward C. Rosenow, M.D., reported that the Los Angeles County Medical Association was interested in the formation of a medical economics bureau at the state level and that, if a study on trends of medical care is to be instituted, Los Angeles County be used as a pilot study. Doctor Rosenow stated that the Los Angeles County Medical Association would be very happy to cooperate fully with a research department once it is established.

11. *Report of the President:*

President West asked for clarification from the Council with respect to the establishment of his committee and its function. He urged that the Council not refer problems to his committee which required action at this time. Doctor West recommended that his committee be considered an "ad hoc" committee to establish a Department of Research and Planning; that the committee review the integration and operation of such a department when it is established and that the committee serve as an advisory committee to the department.

On motion duly made and seconded, a vote of confidence was given to Doctor West and he was urged to proceed with all possible speed.

12. *Report of the President-Elect:*

Doctor Reynolds emphasized the need for a study on tetanus as to its relation to liability. He urged that county medical societies invite members of the State Legislature to attend their meetings.

13. *House of Delegates Resolutions:*

The Council considered resolutions adopted by the 1958 House of Delegates.

On motion duly made and seconded, in each instance, the Council took the following actions on the resolutions:

No. 6: Voted to so instruct the fee schedule committee.

No. 14: Sections 1-5: Referred to each component medical society. Section 6: Referred to the fee schedule committee. Sections 7-8: Referred to the Medical Services Commission for consideration and study.

No. 25, 30, 64: Referred to Doctor West's committee.

No. 28: Referred to the Public Relations Committee (already sent to the A.M.A.).

No. 44: Requested that this resolution be implemented through the C.M.A. office.

No. 45: Referred to the Public Relations Committee.

No. 46: Referred to the Commission on Medical Services.

No. 49, 50, 51: The first portion of this resolution was referred to the Committee on Other Professions for implementation. The second part of the resolution has already been met.

No. 53: Approved.

No. 71: Referred to the section on radiology of the C.M.A. for study and consideration and report back to the Council.

Report of the Committee on Adoptions as adopted by the House of Delegates was approved.

14. *Future Council Meetings:*

On motion duly made and seconded, it was voted that the Council meetings will be held on the second Saturday of each month.

15. *Public Relations:*

Mr. Clancy announced that the emergency call service publicity material was being made available to all county medical societies.

Doctor Sherman presented a resolution congratulating Dr. Lum for his 25 years of service on the Alameda City School Board, 19 years as its president, and on the fact that the newest school in the city had been named after him. On motion duly made and seconded, this resolution was adopted.

16. *State Department of Public Health:*

Doctor Fritz Krietie reported that there was every indication that this year we have a low incidence of polio. There are only 29 cases reported so far this year.

17. *California Physicians' Service:*

Doctor Heron reported that a joint meeting had been held with the C.P.S. fee schedule committee and the chairman of the C.M.A. fee schedule committee regarding a schedule for the $7,200 income ceiling program in Los Angeles County. The schedule to be priced at a $5 unit value.

On motion duly made and seconded it was voted to approve the proposed schedule.

Doctor Heron reported that the House of Delegates Resolution No. 2 had already been implemented. It is planned to send a small booklet to subscribers showing the increase in costs in professional and hospital care in an effort to comply with House of Delegates resolution No. 27. He reported that the C.P.S. study committee had recommended that a pilot study for OASI recipients over age 65 be undertaken in Alameda County. The study to feature out-patient medical services and to be promoted by the county medical society. This recommendation has been approved by the C.P.S. Trustees and by the Alameda-Contra Costa Medical Association.

Doctor Heron reported that the board had approved the Glenn County program which calls for C.P.S. to administer a program of out-patient services where funds are paid out of county revenue. No federal funds are involved.

18. *National Conference on Labor Health Services:*

Mr. Boyd Thompson reported on the Washington meeting of the National Conference on Labor Health Services. The second national conference will be held in September of this year.

Adjournment:

There being no further business to come before the Council, the meeting was adjourned in honor of Doctor Lum at 5 p.m.

DONALD D. LUM, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

In Memoriam

Allum, Arthur Wesley. Died in Santa Monica, July 20, 1958, aged 78, of heart disease. Graduate of McGill University Faculty of Medicine, Montreal, Quebec, Canada, 1903. Licensed in California in 1928. Doctor Allum was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Ammann, Francis Xavier, Jr. Died in Los Angeles, July 10, 1958, aged 68. Graduate of College of Physicians and Surgeons of Los Angeles, 1912. Licensed in California in 1912. Dr. Ammann was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Bolander, Lewis P. Died in Pacific Palisades, July 26, 1958, aged 58. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1927. Licensed in California in 1927. Doctor Bolander was a member of the Los Angeles County Medical Association.

✣

Drescher, Edward Philip. Died in Berkeley, July 12, 1958, aged 43, of acute lymphatic leukemia. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1940. Licensed in California in 1940. Dr. Drescher was a member of the Alameda-Contra Costa Medical Association.

✣

Engel, Samuel. Died June 28, 1958, aged 60. Graduate of Ludwig-Maximilians-Universitat Medizinische Fakultat, Munchen, Bavaria, 1922. Licensed in California in 1939. Doctor Engel was a member of the San Francisco Medical Society.

Ferrier, Paul Alexander. Died in Pasadena, July 10, 1958, aged 74, of pulmonary embolus secondary to cerebral arteriosclerosis. Graduate of University of Pennsylvania School of Medicine, Philadelphia, 1911. Licensed in California in 1919. Dr. Ferrier was a member of the Los Angeles County Medical Association.

✣

Harris, Stephen A. Died July 15, 1958, aged 49. Graduate of Cornell University Medical College, New York City, 1935. Licensed in California in 1941. Dr. Harris was a member of the Alameda-Contra Costa Medical Association.

✣

McCoy, Bernice. Died June 13, 1958, aged 62. Graduate of University of Pennsylvania School of Medicine, Philadelphia, 1924. Licensed in California in 1925. Dr. McCoy was a member of the Los Angeles County Medical Association.

✣

Rambo, William H. Died in Rolling Hills, July 20, 1958, aged 58, of heart disease. Graduate of College of Medical Evangelists, Loma Linda-Los Angeles, 1926. Licensed in California in 1926. Dr. Rambo was a member of the Los Angeles County Medical Association.

✣

Sawyer, John B. Died near Bishop, August 5, 1958, aged 43, in a glider collision. Graduate of St. Louis University of Medicine, St. Louis, Missouri, 1943. Licensed in California in 1944. Doctor Sawyer was a member of the Alameda-Contra Costa Medical Association.

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, ***M.D., M.P.H.***
Director, California State Department of Public Health

THE INCIDENCE of paralytic poliomyelitis is continuing to remain well below that of previous years, with only 64 cases reported since April 1 and through August 23, compared with 105 and 606 paralytic cases reported during the corresponding periods of 1957 and 1956.

The age distribution of paralytic cases is remaining essentially the same as last year, with the largest proportion of cases—about one-third—in children under five years of age. Most of these preschool children had not been vaccinated. One-fourth of the paralytic cases were in adults over the age of 20, most of them in unvaccinated persons.

* * *

The medical profession will have an opportunity, October 1 to 3, to take positive action in the drafting of recommendations for the reduction of traffic accident injuries.

All physicians in California are cordially invited to attend and participate in the Governor's Traffic Safety Conference in Sacramento during that period. This marks the second year of the formation of the Medical Division of the Conference, which this year is under the chairmanship of G. Hunter Shelden, M.D., of Pasadena.

The medical section provides an excellent forum for physicians to present their views and suggestions for the reduction of accident injuries, and to present recommendations to the Governor which ultimately may influence legislative action in this field.

The conference this year will confine its deliberations to three principal areas:

1. Medical standards for the issuance of drivers' licenses.

2. Determination of what causes automobile injuries and what structural changes in cars would mitigate these injuries.

3. The availability and quality of ambulance emergency care, including the training of ambulance crews in first aid.

* * *

Fourteen medical students from 11 universities are attending the summer training program of the State Department of Public Health, working in programs of particular interest to them.

The students have been assigned to a variety of special studies and projects carried on with the department in order to give them research experience and an intimate association with the activities of the agency.

The students are working in the Bureaus of Chronic Disease, Maternal and Child Health, Adult Health and Acute Communicable Diseases, and in such programs as alcoholic rehabilitation, air pollution control, industrial health and radiation, child health supervision, heart disease and neurotropic virus diseases.

They represent medical schools at Stanford, California, George Washington, Howard, Harvard, Western Reserve, Pennsylvania, Cornell, Kansas, Columbia and State University of New York.

* * *

The Blindness Prevention Project reports that some 3,600 preschool youngsters in Van Nuys, in Berkeley and in Orange County have had their vision tested in local programs. Of that number almost 500 have been referred for complete examination by an eye specialist, and of those examined thus far, some 70 were reported to have ocular conditions needing attention.

In seven recent surveys 8,000 persons were tested for glaucoma, and some 1,000 of them were referred for complete examination, resulting in the establishment of diagnosis of the disease in 155 new cases.

* * *

The Department of Health is working on the preparation of regulations governing the licensing and operation of human tissue banks. The regulations, if adopted, would pave the way for the establishment of living tissue banks. It is believed this step will eventually make the banking of tissues as commonplace as the banking of blood.

* * *

State and federal matching funds totaling $16,354,802 were allocated for the construction of 33 hospitals, health centers and nursing home projects at an August 11 and 12 meeting in San Francisco of the State Health Department's Advisory Hospital Council.

This is the tenth year that state-federal funds have been allocated to California projects under the Hill-Burton Hospital Construction Act. In that time more than $85,000,000 has been allocated.

Listed below are the allocations by category and the total amount of state-federal funds, which represent two-thirds of project cost. The remaining one-third is provided by the applicant.

General Hospitals: Community Health Association, Hoopa, $100,000; Fallbrook Hospital District, Oceanside, $257,618; Tri-City Hospital District, Oceanside, $1,241,386; Lassen County Hospital, Susanville, $334,160; Grossmont Hospital District, La Mesa, $1,334,502; San Miguel Hospital Association, La Mesa, $990,760; Antelope Valley Hospital District, Lancaster, $1,891,324; Marin General Hospital, San Rafael, $1,436,830; Livermore Valley Community Hospital, $587,288; St. Rose Hospital, Hayward, $1,462,874, and equipment for Washington Township Hospital, Niles, $150,666.

Psychiatric Hospitals: Santa Barbara County, Santa Barbara, $280,480; Sutter Memorial Hospital, Sacramento, $436,156; Memorial Hospital, Long Beach, $172,800; Riverside County, Riverside, $408,318; Community Hospital, Fresno, $152,700, and St. Mary's, San Francisco, $645,054.

Health Centers: Imperial County, $171,344; Sutter-Yuba counties, $141,832; Los Angeles City, Valley District, $277,400; Los Angeles County, Whittier District, $378,556; Riverside County, $415,276; Yolo County, $115,408, and Merced County, $140,478.

Chronic Hospitals: Rancho Los Amigos, Whittier, $536,860.

Nursing Homes: Humboldt County, Eureka, $495,984; Shasta County, Redding, $340,100, and St. John's Hospital, Oxnard, $42,852.

Diagnostic and Treatment Centers: Mercy Hospital, San Diego, $356,478, and San Joaquin County, Stockton, $180,382.

Rehabilitation Centers: Casa Colina, Claremont, $312,816, and Crystal Springs, San Mateo County, $566,120.

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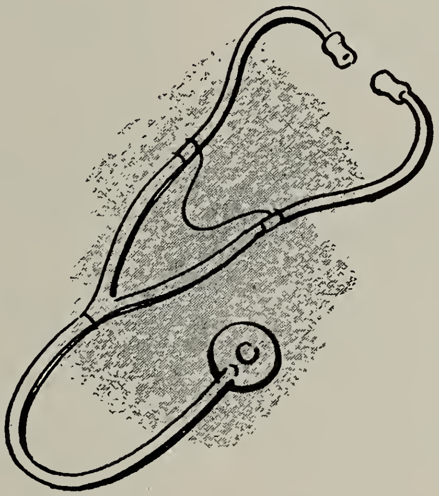
Physicians desiring further details concerning any of the items in this communication may direct inquiries to the California State Department of Public Health, 2151 Berkeley Way, Berkeley 4.



WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

COOPERATE *and* ACHIEVE

This has been a busy summer for your Auxiliary officers. To avoid last minute rushing to coordinate our working program for the year, our corresponding secretary, Mrs. Arthur Hurd, has been contacting all officers, committee chairmen, district councilors and all county presidents and presidents-elect, collecting their data and messages for our annual workbook.

The workbook material provides the basis from which we all take direction, and explanation of the fundamental actions that need to be followed, to so coordinate our efforts on all levels that all officers and county presidents work in unison.

Special emphasis has been placed on early action on the part of everyone to facilitate the prompt beginning of activities early in September, to enable us to accomplish a comparable return for this short year in relation to the accomplishments of other years, which have functioned with a full twelvemonth period.

The California Medical Association office force has been more than willing with its assistance.

Perhaps you are not aware of the fact, but your central office mimeographs our workbooks for us, and the office force there has been turning them out as fast as we supply the copy. It is an extracurricular duty for these employees and we are most grateful for their cheerful, efficient help.

As an additional means for the understanding of all phases of our activities, we planned early in the year to change our Fall Conference program from the traditional panel form of study to the more modern method of informal discussion groups of small numbers of members—county presidents, presidents-elect and branch chairmen—assisted by the state officers and committee chairmen.

The establishment of this change in the study method of our conference has required a great deal of planning and the dissemination of directives to the conference members.

To assure an efficient procedure pattern and to make sure each member will be prepared for the part she will play in her individual category, we have outlined in detail the contribution of each participant. With a complete understanding of the overall program and the contribution of each member clarified, we hope to avoid the chaos usually attendant upon new procedures.

With this type of "school of instruction" combined with the increased communications interest between the Association and the Auxiliary, a continuity of the basic objectives of Auxiliary work will strengthen our unity and increase our effectiveness in leadership in health matters.

Unity is essential if we expect to successfully assist our Medical Association in its program for the advancement of medicine and public health.

Underlying all our work are these main ideas:

Evaluation—Do our projects help toward our objectives?

Exploration—Of group discussion procedures relating to group productivity.

Cooperation—On a scope that encompasses all county Auxiliaries on state and national levels.

Achievement—Through our combined efforts that will justify the appreciation of the Association and the Association's continued interest in the range of our activities.

Public Assistance—Through an intelligent approach to community welfare problems, and the advancement of medical education.

An excerpt from our national president's article, "Changing of the Guard" (concerning the installation of officers who carry on, with renewed interest, the approach to our goals), leaves no doubt in our minds that the time and effort extended in improving the methods to accomplish our goals, will bear fruit.

"There is time to be found for good things, good works, good turns. The key is to organize and to apportion time. Give thought to your Auxiliary, its activities and your personal actions. I give you this challenge for the coming year. Make a united effort to consolidate the value of your citizenship by participating in worthwhile community and social activities which will further the good of all. Thus you will safeguard Today's Health for Tomorrow, and your counsel and opinions and support will be sought. 'By their deeds shall ye know them'."

We are looking forward to the assistance of some of the California Medical Association members and California Medical Association office personnel to help us coordinate the findings of the study groups. On the final day of the conference a panel of these advisors and of Auxiliary members will correlate the conclusions reached, with the aims and ideals of the Association.

Mrs. Newell Jones
President, Woman's Auxiliary to the California Medical Association

NEWS & NOTES

NATIONAL · STATE · COUNTY

ALAMEDA

Research in heart disease now under way at Children's Hospital of the East Bay will be furthered by two grants given by the Alameda County Heart Association, Dr. James L. Dennis, medical director of the hospital, announced.

These grants will help support two fellowships at the hospital. A total of $2,500 has been designated for the Norman B. Leet Fellowship and $3,000 has been given to maintain investigation related to cardiac by-pass operations.

The Norman B. Leet Fellowship in Cardiology has been awarded to **Dr. Sanford Sherman,** who is entering his second year of pediatric residency at Children's Hospital. The fellowship was established as a memorial to Dr. Leet, who died of heart disease in 1957. The medical staff at Children's Hospital, family and friends of the late Dr. Leet and the Heart Association all cooperated in raising funds to establish this fellowship.

The second grant was made to **Dr. Thomas C. Cock,** who will be working two days a week on research at the hospital.

LOS ANGELES

Officers of the **Los Angeles Radiological Society** who were elected in June and took office on September 1 are: President, Dr. Lewis J. Peha; vice-president, Dr. Putnam C. Kennedy; secretary, Dr. Robert B. Engle; treasurer, Dr. Robert E. Rickenberg. Elected a member of the executive committee for a term of three years was Dr. Richard A. Kredel.

* * *

Mr. Robert W. Jaross of Los Angeles, now in his third year at the University of Southern California School of Medicine, Los Angeles, has been awarded a $500 scholarship by the Allergy Foundation of America for research and clinical training in the field of allergic diseases.

Mr. Jaross will work on studies of the characterization of skin-sensitizing antibodies under the direction of Dr. Frederick Aladjem, assistant professor of medical microbiology at the University of Southern California.

* * *

The fifth annual meeting of the **Southern California Psychiatric Society,** Southern California District Branch of the American Psychiatric Association, will be held on Saturday, October 4, 1958, at the Hotel Statler, Los Angeles.

Further information and particulars may be obtained from Southern California Psychiatric Society, 427 North Camden Drive, Beverly Hills.

SAN FRANCISCO

The American Heart Association's special sessions for clinicians, which is a part of the annual meeting of the Association, will be held in the Civic Auditorium, San Francisco, Friday, October 24. The program follows:

9:30 a.m. to 11:00 a.m.

Approach to Diagnosis Without Recourse to Special Tests: Alexander S. Nadas, M.D., Boston, Mass.

Use of Special Tests in Diagnosis: S. Gilbert Blount, Jr., M.D., Denver, Colo.

Correlation of Clinical and Laboratory Findings—a Discussion: Alexander S. Nadas, M.D., Boston, Mass.; S. Gilbert Blount, M.D., Denver, Colo., and C. Walton Lillehei, M.D., Minneapolis, Minn.

What's New in Treatment: C. Walton Lillehei, M.D., Minneapolis, Minn.

11:00 a.m.—INTERMISSION

11:10 a.m. to 12:30 p.m.—Symposium on Treatment of Intravascular Clotting:

Anticoagulants and Clot Dissolvers: Sol Sherry, M.D., St. Louis, Mo.

Coronary Artery Heart Disease: John Martin Askey, M.D., Los Angeles, Calif.

Cerebral Artery Disease: Clark H. Millikan, M.D., Rochester, Minn.

Peripheral Venous Disease: Hugh Montgomery, M.D., Philadelphia, Pa.

12:30 p.m.—ADJOURNMENT

2:00 p.m. to 5:00 p.m.—Current Subjects of Special Interest

Clinical Evaluation of Chlorothiaside: Walter M. Kirkendall, M.D., Iowa City, Iowa.

Traumatic Heart Disease: Loren F. Parmley, Jr., M.D., Washington, D. C.

The "Tough Case" of Bacterial Endocarditis: Ernest Jawetz, M.D., San Francisco.

Panel Discussion: What's New in Arrhythmias

Hermann L. Blumgart, M.D., Boston, Mass., Moderator; A. Carlton Ernstene, M.D., Cleveland, Ohio; W. Proctor Harvey, M.D., Washington, D. C.; R. Bruce Logue, M.D., Emory University, Georgia; Maurice Sokolow, M.D., San Francisco.

Symposium on Peripheral Arterial Insufficiency:

Medical Aspects: Fay LeFevre, M.D., Cleveland, Ohio; Surgical Aspects: Michael E. DeBakey, M.D., Houston, Tex.

* * *

Dr. Lowell A. Rantz, professor of medicine, became associate dean of Stanford University School of Medicine, September 1. He joined two other associate deans, Mr. Lyle E. Cook and Dr. Lyman H. Stowe. He replaced Dr. Jay Ward Smith, who recently resigned to resume private practice.

Dr. Rantz will assist Dean Robert H. Alway in the administration of medical affairs and professional relations both inside and outside the medical school. He will continue his teaching, research, and clinical activities in the Department of Medicine.

SAN MATEO

An offer has been made by the Eye Section of the San Mateo County Medical Society to lend to any qualified ophthalmology organization **an exhibit on glaucoma** suitable for use at state and county fairs. Designed by Dr. Thomas Stevenson with the assistance of Drs. Arnold Drucker and Stanley Golden, the exhibit was used at the San Mateo County Fair this summer. In making the offer to lend the San Mateo organization said that the only cost would be shipping charges from San Mateo. The exhibit requires space of 10x10 feet. Use of Bulletin No. 13 on Glaucoma from the National Society for the Prevention of Blindness and the bulletin "What is an Ophthalmologist" is said to make the exhibit very effective. Further information may be obtained from Dr. Rodney E. Abernethy, 401 North San Mateo Drive, San Mateo.

GENERAL

The **Western Society for Clinical Research** will hold its twelfth annual meeting in Carmel on Thursday afternoon, Friday morning, and Saturday morning, January 29 through January 31, 1959. Information regarding the meeting may be obtained from the secretary, Dr. William N. Valentine, UCLA Medical Center, Los Angeles 24.

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Grants in aid of research totaling $148,830 were awarded to 21 scientists in California recently by the American Heart Association as follows:

Los Angeles County—Douglas R. Drury, John W. Mehl, Yale J. Katz, Margaret G. Morehouse, Frederick Aladjem, Franz K. Bauer and Harry Sobel, University of Southern California School of Medicine; Jerome Harold Kay, University of Southern California and St. Vincent's Hospital; Howard A. Joos, University of Southern California and Childrens Hospital; Richard S. Schweet, City of Hope; Allan J. Brady and Wilfried F. H. M. Mommaerts, University of California at Los Angeles Medical Center, William Drell, Veterans Administration Center; Peter F. Salisbury and Alvin L. Sellers, Institute for Medical Research, Cedars of Lebanon. Total amount of grants, $100,980.

Redlands—Robert H. Maybury, University of Redlands, $6,600.

San Francisco—Isidore S. Edelman, University of California; John J. Osborn, Stanford University Hospitals; Elliott Rapaport, Ray H. Rosenman, and Meyer Friedman, Mount Zion Hospital. Total amount of grants, $41,250.

* * *

The 23rd annual convention of the **American College of Gastroenterology** will be held at the Jung Hotel in New Orleans on October 20, 21, 22, 1958.

In addition to the many individual papers to be presented, there will be panel discussions on gastric carcinoma, steroids in gastroenterology and functional disturbances of the gastrointestinal tract. The session will be open to all physicians without charge.

On October 23, 24, and 25, immediately following the convention, Dr. Owen H. Wangensteen of Minneapolis and Dr. I. Snapper of Brooklyn will again be the moderators of the annual course in postgraduate gastroenterology. The sessions will be held at the Jung Hotel and in the Auditorium of the Louisiana State University School of Medicine. Attendance at the course will be limited to those who have registered in advance.

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The second annual meeting of the **American Association of Medical Assistants** will take place October 31, November 1 and 2, at the Palmer House, Chicago. In announcing the meeting, the organization said that all medical assistants are cordially invited to attend and urged physicians to call the meeting to the attention of their assistants.

POSTGRADUATE
EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Calculations in Clinical Chemistry. Wednesdays, September 17 through October 22. Twelve hours. Fee: $25.00.

Beginning Medical Terminology (Section 1). UCLA Campus, Tuesdays, September 16 through January 27, 1959. Forty-five hours. Fee: $35.00.

Beginning Medical Terminology (Section 2). 813 S. Hill Street, Los Angeles, Thursdays, September 18 through February 5, 1959. Forty-five hours. Fee: $35.00.

St. Joseph Hospital, Burbank, Postgraduate Medical Lecture Series. Tuesdays, September 23 to December 9. Twenty-four hours. Fee: $50.00.

Counseling and Placement of Hospital Nursing Personnel. Wednesdays, September 24 through December 10. Thirty hours. Fee: $25.00.

Teaching Clinics. Thursdays, September 25 to December 18. Twenty-four hours. Fee: $50.00.

Surgical Anatomy. Mondays, September 29 through December 1. Twenty hours. Fee: $85.00.

Inservice Course in Human Relations, Shriner's Children's Hospital, Tuesdays, beginning September. Twelve hours.*

Inservice Advanced Medical Terminology for Medical Center Personnel. Beginning October.†

Principles of Veterinary Surgery. Beginning October. Sixteen hours.*

Selected Topics in the Pathological Physiology of the Cardiovascular System. Mondays, October 6 through December 8. Twenty hours. Fee: $60.00.

Aviation Medicine. Wednesday, Thursday and Friday, October 22, 23 and 24. Nineteen hours. Fee: $65.00.

Hematology: Abnormal Cell Cytology, San Bernardino. Tuesdays, October 28 through December 16. Twenty-four hours. Fee: $40.00.

Practical Clinical Chemistry for Laboratory Technologists. Twenty-four hours. October 29 to December 17. Fee: $35.00 plus $5.00 breakage fee. $20.00 for lecture only.

Removal of Foreign Bodies from Lung and Bronchi. Saturday and Sunday, November 8 and 9. Nine hours. Fee: $110.00.

Minor Surgery. Friday and Saturday, November 14 and 15. Twelve hours.*

Obstetrics and Gynecology. Thursday, Friday and Saturday, November 20, 21 and 22.†

New Aspects of Peripheral Vascular Disease. Friday and Saturday, December 5 and 6.†

Fractures. Friday and Saturday, December 12 and 13.†

Athletic Injuries. Friday and Saturday, December 19 and 20.†

Physical and Clinical Aspects of the:

Endocrine System. Wednesday, November 19, 1958. Six hours.*

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*Fees to be announced.

†Fees and hours to be announced.

Gastrointestinal Tract. Wednesday, December 17, 1958. Six hours.*

Respiration. Wednesday, January 14, 1959. Six hours.*

Kidney. Wednesday, February 18, 1959. Six hours.*

Nervous System. Wednesday, March 18, 1959. Six hours.*

Clinical Traineeships—Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Medical Evening Series (East Oakland Hospital). Tuesdays, September 16 through December 9. Twenty-four hours. Fee: $50.00.

Obstetrics and Gynecology. Thursday through Saturday, September 18 through September 20. Twenty-one hours. Fee: $50.00.

Congenital Abnormalities. (Saturday morning sessions) October 4 through November 8. Fifteen hours.*

Psychiatric Orientation for General Practice (Herrick Hospital, Berkeley). Sunday through Tuesday, October 26 to 28. Twenty-one hours. Fee: $50.00.

Arthritis and Connective Tissue Diseases. Monday through Wednesday, November 3 through November 5. Twenty-one hours.*

Urology. Friday, November 7. Seven hours. Fee: $20.00.

Proctology. Saturday, November 8. Seven hours. Fee: $20.00.

Plastic Surgery. Thursday, November 13. Seven hours. Fee: $20.00.

Hand Surgery. Friday, November 14. Seven hours. Fee: $20.00.

New Look in Speech Problems. Saturday, November 15. Seven hours. Fee: $12.50.

Ophthalmology — External Diseases. Wednesday through Saturday, December 3 through December 6. Twenty-eight hours.*

Disturbances in Gastrointestinal Motility. Sunday through Tuesday, December 7 through 9. Twenty-five hours.*

Postgraduate Clinics in Dermatology. Friday and Saturday, January 16 and 17. Fourteen hours. Fee: $40.00.

Modern Pharmacology and Mental Disease. Sunday through Tuesday, January 25 through 27, 1959. Twenty-five hours.*

Course for Physicians in General Practice. Monday through Friday, April 6 through April 10. Thirty-five hours. Fee: $75.00.

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year Postgraduate Series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Intensive Review of Internal Medicine. September 22 through October 3. Course designed for the Internist. Emphasis placed on review of important fundamentals as well as recent advances in field of internal medicine. Program is scheduled just prior to Part I of American Board of Internal Medicine examination. Tuition: $65.00.

Bedside Clinics and Set Clinics in Internal Medicine. October 2 through January 15, 1959. Small groups will study and examine interesting patients at bedside. Discussion of physical findings as well as diagnostic and therapeutic measures, ECG and x-rays will be conducted by instructor. Tuition: $65.00. Los Angeles County Hospital.

Therapeutic Interviewing of Patients with Emotional Problems. October 15 through January 8, 1959. Course designed for practicing physician. After general orientation, meetings will be based upon tape recordings of interviews with patients made by participating physicians. Tuition: $100.00. Los Angeles County Hospital, Psychiatric Unit.

Homecoming Course. October 16 and 17. Two-day refresher course to cover advances in diagnosis and treatment developed in last five years. Tuition: Alumni, $25.00; Non-alumni, $50.00.

Symposium on Sexual Problems as Seen in General Practice. November 7. Tuition: $25.00. Hotel Statler, Los Angeles.

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Audio-Visual Postgraduate Refresher Courses. Courses are made up of four or more half-hour lectures each, recorded on hi-fi magnetic tape and illustrated by 35-mm. filmstrips or slides in full color, and adapted for use on any standard tape recorder and filmstrip or slide projector, automatic or manual.

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*Fees to be announced.

Contact: Paul D. Foster, M.D., chairman, Committee on Audio-Visual Courses, College of Medical Evangelists School of Medicine, 316 North Bailey St., Los Angeles 33.

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Thorax, Abdomen and Pelvis (27 periods, 121 hours), January 7 through April 15, 1959. Tuition: $125.00. **Head and Neck** (14 periods, 63 hours), April 22 through June 3, 1959. Tuition: $75.00.

Surgical Anatomy—Thorax, Abdomen and Pelvis (14 periods, 28 hours), January 7 through April 15, 1959. Tuition: $50.00. **Head and Neck** (12 periods, 24 hours), April 22 through June 3, 1959. Tuition: $35.00.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE CIRCUIT COURSES

Sacramento Valley Circuit for Dunsmuir, Chico, Marysville and Auburn, in cooperation with Stanford University School of Medicine begins week of October 13, 1958.

North Coast Circuit for Eureka, Ukiah and Napa, in cooperation with University of California, San Francisco, begins week of October 13, 1958.

West Coast Circuit in cooperation with College of Medical Evangelists. Santa Maria, November 19; Ojai, November 20.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel Californian, Fresno. (Local chairman not yet appointed.)

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25, 26 and 27, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

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Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued on November 1, 1958. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

SEPTEMBER MEETINGS

Southwestern Pediatric Society, Dinner Meetings, September 17, November 19 and January 14, University Club, 6:30 p.m., Los Angeles. *Contact:* Robert Shirley, M.D., secretary-treasurer, 11633 San Vicente Blvd., Los Angeles 49.

San Diego County General Hospital Twelfth Annual Postgraduate Assembly, September 17 and 18, San Diego. *Contact:* William T. Nute, executive secretary, San Diego County Medical Society, 3427 Fourth Avenue, San Diego 3.

Western Tuberculosis Conference Meeting of Eleven Western States plus Hawaii and Alaska, September 17 through 20, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. Dalrie S. Lichtenstiger executive director, 130 Hayes Street, San Francisco.

Nevada State Medical Association Annual Meeting, September 17 through 20, Elko, Nevada. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Pacific Dermatologic Association Tenth Annual Meeting, September 18 through 20, Hotel del Coronado, Coronado, Calif. *Contact:* Louis H. Winer, M.D., secretary-treasurer, 9915 Santa Monica Blvd., Beverly Hills, Calif.

Colorado State Medical Society Annual Session, September 24 through 27, Broadmoor Hotel, Colorado Springs. *Contact:* Harvey T. Sethman, executive secretary, 835 Republic Bldg., Denver 2.

OCTOBER MEETINGS

California Division of the American Cancer Society Annual Meeting, October 1 to 4, Fairmont Hotel, San Francisco. Wednesday, October 1, afternoon and evening, a cancer conference for entire medical profession.

Contact: Walter E. Batchelder, M.D., medical director, C.M.A. Cancer Commission, 450 Sutter St., San Francisco 8.

1958 WESTERN INDUSTRIAL HEALTH CONFERENCE sponsored by the Western Industrial Medical Association. October 3 to 5, Claremont Hotel, Berkeley. *Contact:* John E. Kirkpatrick, M.D., 516 Sutter St., San Francisco 2; or A. C. Remington, M.D., 9851 Sepulveda Blvd., Los Angeles 45.

CALIFORNIA ACADEMY OF GENERAL PRACTICE Tenth Annual Scientific Assembly, October 5 to 8, Masonic Temple, San Francisco. *Contact:* William W. Rogers, executive secretary, 461 Market Street, San Francisco 5.

KAISER FOUNDATION HOSPITALS OF NORTHERN CALIFORNIA Symposium on Viruses and Viral Disease, October 10 and 11, Hotel Fairmont, Gold Room, San Francisco. All physicians and medical students are invited, without fee. *Contact:* Martin A. Shearn, M.D., director of education, Kaiser Foundation Hospital, 280 W. MacArthur Blvd., Oakland, Calif.

FIFTH ANNUAL FORT MILEY SURGICAL CLINICS AND SYMPOSIA sponsored by the San Francisco Academy of General Practice in cooperation with Faculties of Stanford University School of Medicine and University of California School of Medicine at Fort Miley Veterans Administration Hospital, 42nd Avenue and Clement Street, San Francisco, will start on October 14, 1958 at 8 p.m. and each Tuesday thereafter ending November 18, 1958. *Contact:* Alexander F. Fraser, M.D., 3490 20th Street, San Francisco.

CALIFORNIA SOCIETY OF INTERNAL MEDICINE Annual Meeting, October 17 to 19, Ahwahnee Hotel, Yosemite. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Clyde C. Greene, M.D., secretary-treasurer, 350 Post St., San Francisco 8.

CALIFORNIA BOARD OF MEDICAL EXAMINERS—Written Examination, October 20 through 23, Sacramento. *Contact:* Louis E. Jones, M.D., 1020 N Street, Sacramento.

AMERICAN HEART ASSOCIATION Scientific Sessions and Meetings, October 24 to 28, Fairmont Hotel and Civic Auditorium, San Francisco. *Contact:* J. Keith Thwaites, executive director, California Heart Association, 1428 Bush Street, San Francisco 9.

LOS ANGELES COUNTY HEART ASSOCIATION 28th Annual Professional Symposium, October 29 and 30, Wilshire Ebell Theater. *Contact:* Los Angeles County Heart Association, 660 S. Western Ave., Los Angeles 5, DUnkirk 5-4231.

HAWAII HEART ASSOCIATION, INC. Special Cardiological Sessions, October 30 through November 1, Princess Kaiulani Hotel, Honolulu. *Contact:* Alfred S. Hartwell, M.D., c/o Hawaii Heart Association, 1018 Lunalilo St., Honolulu.

TENTH WESTERN INSTITUTE ON EPILEPSY, University of Colorado School of Medicine, October 30 through November 1, Denver, Colorado. *Contact:* C. Wesley Eisele, M.D., University of Colorado Medical Center, 4200 East Ninth Ave., Denver.

SAN DIEGO COUNTY HEART ASSOCIATION 8th Annual Symposium on Heart Diseases, all day, October 31, U. S. Naval Hospital Auditorium, San Diego. *Contact:* O. M. Avison, executive director, San Diego County Heart Association, 1651 Fourth Ave., San Diego, BElmont 4-5101.

NOVEMBER MEETINGS

SANTA BARBARA COUNTY HEART ASSOCIATION, Professional Symposium, 9 to 5 p.m., November 1, Biltmore Hotel, Santa Barbara. *Contact:* Mrs. Katherine McCloskey, executive director, 18 La Arcada Court, Santa Barbara.

CALIFORNIA SCHOOL HEALTH ASSOCIATION annual meeting, November 8 and 9, Hacienda Hotel, Fresno. *Contact:* Miss Kathleen Fox, health educator, City of Long Beach Department of Public Health, 2655 Pine Ave., Long Beach 6.

SONOMA COUNTY HEART ASSOCIATION Fifth Annual Symposium on Cardiovascular Disease. Program by University of California, November 12, 8:30 a.m. to 5 p.m., Odd Fellows Hall, Santa Rosa. *Contact:* Jack Froom, M.D., 210 Fourth Street, Petaluma.

CALIFORNIA BOARD OF MEDICAL EXAMINERS—Oral Examination, November 15, San Francisco. Oral and Clinical Examination for Foreign Medical School Graduates, November 16, San Francisco. *Contact:* Louis E. Jones, M.D., 1020 N Street, Sacramento.

1959 MEETINGS

CALIFORNIA MEDICAL ASSOCIATION Annual Meeting, February 22 through February 25, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

LOS ANGELES COUNTY HEART ASSOCIATION Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., Chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

CALIFORNIA HEART ASSOCIATION Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION Annual Meeting. June 1 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

THE PHYSICIAN'S *Bookshelf*

TEXTBOOK OF VIROLOGY—For Students and Practitioners of Medicine—Third Edition— A. H. Rhodes, M.D., F.P.C.P. (Edin.), F.R.S.C. Director, School of Hygiene, University of Toronto; Professor of Microbiology, School of Hygiene, University of Toronto; and Virologist, The Hospital for Sick Children, Toronto; and C. E. Van Rooyen, M.D., D.Sc. (Edin.) M.R.C.P. (Lond.) F.R.C.P. (C), Professor of Bacteriology, Dalhousie University, Halifax, Nova Scotia; Associate Director, Nova Scotia Public Health Laboratory, and Honorary Consultant in Virus Diseases, The Royal Canadian Naval Hospital, Halifax. Williams and Wilkins Co., Mt. Royal and Guilford Ave., Baltimore 2, Maryland, 1958. 642 pages, $10.00.

Only two texts are available that are entirely suitable as source material for medical students and physicians in their study of virus disease. This one, now available in the third edition, has seemed to the reviewer to be the most satisfactory. Frequent revisions have been necessary since the study of filterable viruses and disease caused by them is the fastest moving field in microbiology. Any text will, of necessity, be out of date by the time it appears but the authors of this one have included sufficient information so that the student will at least be aware of the beginnings of many current and exciting developments.

The practical details of the laboratory diagnosis of virus diseases are scattered through the book in relationship to the various agents under consideration. A single chapter which would describe, for the student, the basic principles of isolation and identification of viruses and the serological recognition of infection would be helpful, particularly if it categorized the methods used and agents to be expected in the study of disease of the various organ systems. Such orientation has become increasingly important as the diagnosis of virus disease has passed out of the realm of the research institute into that of the clinical laboratory.

It would also be desirable in future editions to rearrange the sections of the text to give added information about the emphasis to those viral diseases that are quantitatively most important. All of the respiratory viruses discussed in this edition receive only twice the space allotted to smallpox, a disease of more historical than immediate clinical significance.

Medical students and physicians will enjoy this book which should be in their libraries. It is highly recommended.

* * *

CLINICAL ELECTROCARDIOGRAPHY — The Spatial Vector Approach—Robert P. Grant, M.D., National Heart Institute, National Institutes of Health, Bethesda. The Blakiston Division, McGraw-Hill Book Company, Inc., New York, 1957. 225 pages, $7.50.

This book is a provocative account of Dr. Grant's attempt to interrelate conventional electrocardiography with the spatial vector approach to interpretation. Dr. Grant has been an exponent of the spatial vector approach for many years and has made original contributions in this field. The book is clearly written, simplifies the vector concept and shows electrocardiograms from which the vector was derived. The book is a highly personal account, and statements are made which, in the reviewer's opinion, could be disputed. Nevertheless, Dr. Grant marshals a good deal of support for them and gives one considerable food for thought. His analysis of left axis deviation, for example, is most interesting, and he supports his concept that left axis deviation is due to anterolateral myocardial infarction with peri-infarction block.

One of the major advantages of Grant's book is the emphasis he places on visualizing the electrocardiogram from an electrophysiological point of view rather than an empirical point of view. His account of electrophysiology as it pertains to the use of the vector in understanding the clinical electrocardiograph is readable and understandable.

The sections on arrhythmias and congenital heart disease are barely adequate and could, with profit, be expanded.

The book is highly recommended as a thoughtful approach to clinical electrocardiography, but the reviewer is not certain whether the book is desirable for a beginner or whether for the physician who is competent in conventional electrocardiography and wishes to learn more about the vector electrocardiology.

* * *

THE CARE OF THE PATIENT IN SURGERY INCLUDING TECHNIQUES (Third Edition)—Edythe Louise Alexander, R.N., B.S., M.A., Director of Nursing Service and Principal of the School of Nursing, Lutheran Medical Center, Brooklyn, N. Y. The C. V. Mosby Company, St. Louis, 1958. 840 pages, with 555 illustrations, including 5 in color, $12.75.

The large field indicated by the title of the book is well covered. It is written primarily for surgical nurses and should prove a good book of reference for them. The first chapter tells how to plan a new operating room and acquaints one with the myriads of details involved in this work. Chapter two deals with sterile equipment and safety factors for patient and personnel. Chapters three, four and five cover skin disinfection, gowning and gloving procedures, standard nursing procedures and suturing techniques. Procedures are well described in steps with word and picture. We are told that the first step in scrubbing is to turn on the faucet and bring the water to a suitable temperature and finally to turn the faucets off. The steps in between are fully outlined. Scrubbing time is governed by the degree of contamination but just how this is determined is not stated. Chapters six to seventeen describe operating room procedures involved in the special surgical fields, but surgery of the eye is omitted. Important anatomical features are simply illustrated and instruments are pictured and named. The volume should be of value to everyone concerned in operating a surgical unit. It is highly recommended.

The cliche of the importance of teamwork is mentioned. The reviewer wishes only that the efficient, silent, indispensable work and skill of the operating room nurse could be put in adequate words of appreciation.

Gunther Nagel, M.D.

CHEMICAL METHODS IN CLINICAL MEDICINE—Their Application and Interpretation with Techniques of Simple Tests—Fourth Edition—G. A. Harrison, B.A., M.D., B.Ch. (Cantab.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), F.R.I.C. Grune & Stratton, New York, 1957. 667 pages, $11.00.

This book has been in print since 1930, and except for a few up to date notations it applies more to medicine of the decade of the first edition than to that of 1957. For example, conjugation of bilirubin with glucuronic acid and the alterations of bilirubin metabolism in disease are reviewed in terms of work done very recently. Following this there is a cursory discussion of liver function tests which are then dismissed as of little or no value. An up to date discussion of chromatography and electrophoresis, though limited in scope, stands in strange contrast to statements that determinations of serum sodium and potassium are largely of academic interest and only occasionally of clinical importance. The discussion relating to diabetes mellitus is disorganized, confusing and in many instances inaccurate; the explanation of the concept of "renal threshold" for glucose is incorrect in its entirety. The text includes comments on treatment which not only have no place in a book on chemical methods, but are incomplete and no longer acceptable.

The techniques for chemical determinations on blood and urine are clearly written, but many of the methods have been superseded by simpler and more reliable ones.

The informal and conversational character of British writing is at times pleasant, but the charm is lost as a result of the frequent use of clinical slang. One statement which is properly italicized deserves repeating. "There is a reasonable chance of interpretation of analyses being correct only if essential clinical findings are known."

The book cannot be recommended.

Marcus A. Krupp, M.D.

* * *

LABORATORY MEDICINE—HEMATOLOGY—John B. Miale, M.D., Professor of Pathology, University of Miami School of Medicine, and Director of Clinical Pathology, Jackson Memorial Hospital, Miami. The C. V. Mosby Company, St. Louis, 1958. 735 pages, 192 illustrations and 9 plates, including 5 in color, $13.75.

There has been an unfortunate tendency in recent years for some young physicians to consider laboratory tests as the foundation for the medical appraisal of a patient. There is often little or not logic in the choice of laboratory procedures in view of the clinical data which the patient presents. Furthermore, the physician all too often loses sight of the precise meaning, value, and limitations of a test. This book represents an attempt to place laboratory tests in their proper perspective in medicine and as such it is an excellent contribution.

The material is well organized and presented in a clear and easily read format. Every aspect of hematology is discussed including all of the most recent developments. For example, there are sections on phase and electron microscopy, the cytochemistry of blood and bone marrow cells, the determination of blood volume and cell survival using isotopes, hemoglobin electrophoresis, etc. On the other hand, the most simple of procedures such as clot retraction, the tourniquet test, and the sedimentation rate are also included, clearly described and illustrated liberally. Although the book contains about 700 pages, it encompasses the field of hematology so well that the novice as well as the expert will find it of great value. It should be useful for anyone in medicine, whether he be medical student, general practitioner, internist or pathologist.

Chapters are well organized and include one on hemopoiesis and recent developments in studies of cell survival, morphology, bone marrow, medullary and extramedullary hemopoisesis, the peripheral blood, the erythrocyte and the leukocyte. Normal and abnormal cell maturation are discussed. The many accompanying plates are satisfactory. Descriptions of cell types are very good and presented in an orderly fashion.

Various procedures for bone marrow aspirations are described with pictures to illustrate the techniques. The procedures for splenic biopsy and lymph node aspiration are also discussed.

Hemolytic and aplastic anemias and the hemoglobinopathies are considered with short sections on etiology, pathology, clinical and laboratory features of each disease. The techniques used for investigation of these disorders are described in the chapter on methods and include the osmotic fragility test, hemoglobin electrophoresis, the Coombs test, and other serologic studies of red cell abnormalities.

There is an excellent chapter on transfusions—its indications, choice of material to be transfused and storage characteristics. Immunological knowledge of red cells, particularly the Rh system, has become exceedingly complex but the author covers this topic more than adequately. Generous space also is devoted to the hazards of transfusions and the investigation of reactions.

Finally, the coagulation mechanism and its disorders are presented. This, of course, is a highly confusing area in hematology but the author handles it well and yet does not simplify it to the point where important considerations are omitted. The known facts about the clotting factors and their roles in the clotting mechanism are presented. There is a description of how to study a patient with a bleeding problem in a logical manner consistent with current knowledge.

This fine book affords the physician an understanding of most of the laboratory procedures in hematology—indications for their use, their interpretation and limitations as well as the techniques used in their performance.

* * *

PSYCHOPATHIC PERSONALITIES—Harold Palmer, M.D. Philosophical Library, New York, 1957. 179 pages, $4.75.

This book is a collection of quasiliterary essays on psychopathology, including schizophrenia, the depressive states, "the obsessions," hysteria, the epilepsies, and others. As such, it is unfortunately titled, since only one of the essays deals with sociopathic personality disturbance, which is the currently more acceptable diagnostic label applied to the old "psychopathic personality."

If Dr. Palmer does use newer terms such as "sociopathic" at times, he gives little other indication in these essays of any acceptance of newer developments in psychiatric concepts. For example, he readily ascribes much sociopathic behavior to "constitutionally inadequate folk," a notion widely discredited by psychiatry for some years. Indeed, a careful perusal of this volume reminds the reviewer of the psychiatric tomes of forty years ago, but without the precise and painstaking clinical descriptiveness of these earlier volumes. As for treatment, the author declares a scientific basis for prescribing convulsive therapy for hysteria, anxiety neurosis, and obsessive neurosis. On the other hand, he arbitrarily rejects psychoanalytic treatment approaches as scientifically unsound.

This volume can be of interest only to the student of psychiatric literature who might be curious as to how a clinician who presumes to write authoritatively on his specialty can so effectively resist the impact of scientific progress in phenomenology and therapy in his field.

H. R. Brickman, M.D.

YOU CAN INCREASE YOUR HEART POWER—Peter J. Steincroph, M.D. Doubleday & Company, Inc., Garden City, N. Y., 1958. 381 pages, $4.95.

This book by Dr. Peter J. Steincroph is a sound attempt by a practicing internist to advise the layman on general medical problems. Much of the discussion is in the form of questions and answers written in a semi-colloquial manner. His suggestions for discussion include imaginary heart trouble, coronary heart disease, arteriosclerosis, high blood pressure, exercise, obesity, sleep, relaxation, alcohol, and faith. The discussion in general is reliable and sound, and the book will be of great value to laymen and probably also to physicians who would like to have advice on simple methods of answering questions from patients. The author is conservative and his data is up-to-date. A typical example concerns his section on "Don't Get Diet Happy," in which he advises obese patients to lose weight, but to go about their reduction sensibly, not cutting out all fats, all proteins, or all carbohydrates. He very properly emphasizes that diets which are deficient in minerals and vitamins make patients drawn and dreary. He also very properly emphasizes, regarding diets in combating arteriosclerosis, that while the medical profession is hopeful we are on the right course, only time will tell.

The book can be highly recommended.

* * *

FLORENCE NIGHTINGALE AND THE DOCTORS—Zachary Cope, M.D., M.S., J. B. Lippincott Company, Medical Department, East Washington Square, Philadelphia 5, Pa., 1958. 163 pages, $5.00.

Although the life of Florence Nightingale has been liberally documented first by Sir Edward Cook, the "official" biographer, and recently by Mrs. Cecil Woodham-Smith, no treatise, so far as we know, has been specially devoted to her relations with the doctors. Florence Nightingale was an unusual woman with a real vocation, almost in the religious sense, for her work. She was also clearly on the neurotic fringe as witnessed by her withdrawal into invalidism for many years although she lived to be ninety and lost none of her mental acuity. Her life was continuously occupied by associations with doctors, some as friends, some as "bosses" or inferiors, some as enemies. Dr. Cope has documented these relations in interesting fashion with a running tale punctuated by innumerable extracts from Florence Nightingale's voluminous correspondence. For those at all familiar with her life this is a story of intense interest. Dr. Cope has done a masterly job.

Arthur L. Bloomfield, M.D.

* * *

CLINICAL ENZYMOLOGY—Gustav J. Martin, Sc.D., Research Director, The National Drug Company, Philadelphia, 1958. Little, Brown & Company, Medical Book Department, Boston 6, Mass. 241 pages, $6.00.

This short book, edited and largely written by Dr. Martin, is hopelessly out of date. Published in April, 1958, it contains no material more recent than 1955. In a field as volatile and rapidly moving as that of enzymology, such a hiatus means almost total loss of pertinence, and on occasion, of accuracy, as new information refutes previously held beliefs.

The book is divided into several sections, beginning with a consideration of some of the basic aspects of enzyme structure, characteristics of enzyme-substrate combination, rate controlling factors, and other general topics of enzyme activity. This aspect of the picture is covered reasonably well, in reference to trypsin, chymotrypsin, hyaluronidase, streptokinase, and a few other enzymes. There is a further chapter on substrates and optimal conditions for the action of these same enzymes. The heart of the book is a chapter on the clinical administration of various enzymes, particularly in patients with thrombophlebitis, local inflammations, edema, and other clinical situations. Whereas the general chapters on basic considerations are couched in the most mathematical terms, this clinical chapter is backed by very unimpressive clinical data, including one reference to the "fact" that patients with thrombophlebitis, treated with I.M. trypsin, have an average hospital stay which is 1.5 days shorter than "controls" treated with anticoagulants. No mention is made of untreated controls, or how the two groups were selected.

It is apparent that the book was written to present this chapter on the clinical use of purified enzymes. In order to justify the very misleading title, a chapter has been included on the diagnostic use of serum enzyme activity measurement. Again this chapter is three years out of date. No critical material has been included on the more recent diagnostic enzyme assays, and no succinct summation of the usefulness of older methods given.

In short, I cannot find any useful purpose to which this book might be put. While its first three chapters are well written, they are not new. The rest of the book had better been left undone.

Laurens P. White, M.D.

* * *

PATHOLOGY FOR THE PHYSICIAN—Sixth Edition, Thoroughly Revised—William Boyd, M.D. Dipl. Psychiat., M.R.C.P. (Edin.), Hon. F.R.C.P. (Edin.), F.R.C.P. (Lond.), Professor Emeritus of Pathology, The University of Toronto. Lea & Febiger, Washington Square, Philadelphia, 1958. 900 pages, 489 illustrations and 12 plates in color, $17.50.

Dr. Boyd's new book represents a complete revision of his well-known "Pathology of Internal Diseases." He offers us a synthesis of cellular pathology, physiology, biochemistry, and bacteriology—with emphasis on the first field, of course—and is not above introducing brief remarks on symptomatology. His style is lively and his anecdotes and side-remarks usually amusing. As other textbooks of pathology have grown progressively more unwieldly and unreadable, Dr. Boyd's writings have come to shine in comparison. Physicians and medical students will find the book interesting and sometimes rewarding to read, although it inculcates no general principles and, in the main, avoids the problems peculiar to pathology.

L. J. Rather, M.D.

* * *

CHEMISTRY AND BIOLOGY OF MUCOPOLYSACCHARIDES—Ciba Foundation Symposium—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Maeve O'Connor, B.A., Editors. Little, Brown and Company, Boston, 1958. 328 pages, 48 illustrations, $8.50.

Simple carbohydrates combine in living things to form complex polysaccharides that may then be linked with fats, protein, or both, in giant molecules that are among the most interesting and least understood chemically or biologically of all constituents of the bodies of plants and animals.

The title of this interesting symposium suggests that the material discussed would be the amino acid polysaccharide complexes (mucopolysaccharides) but, in fact, it is a survey of the information available about most of the biologically active polysaccharides, many of which have been little studied other than as purified substances.

There is much of importance in this book for biological chemists, microbiologists, and immunologists, and for physicians with a special interest in these fields and in connective tissue. There is nothing of immediate clinical interest or importance although developments in this specialized field will doubtless profoundly alter the practice of medicine in the future.

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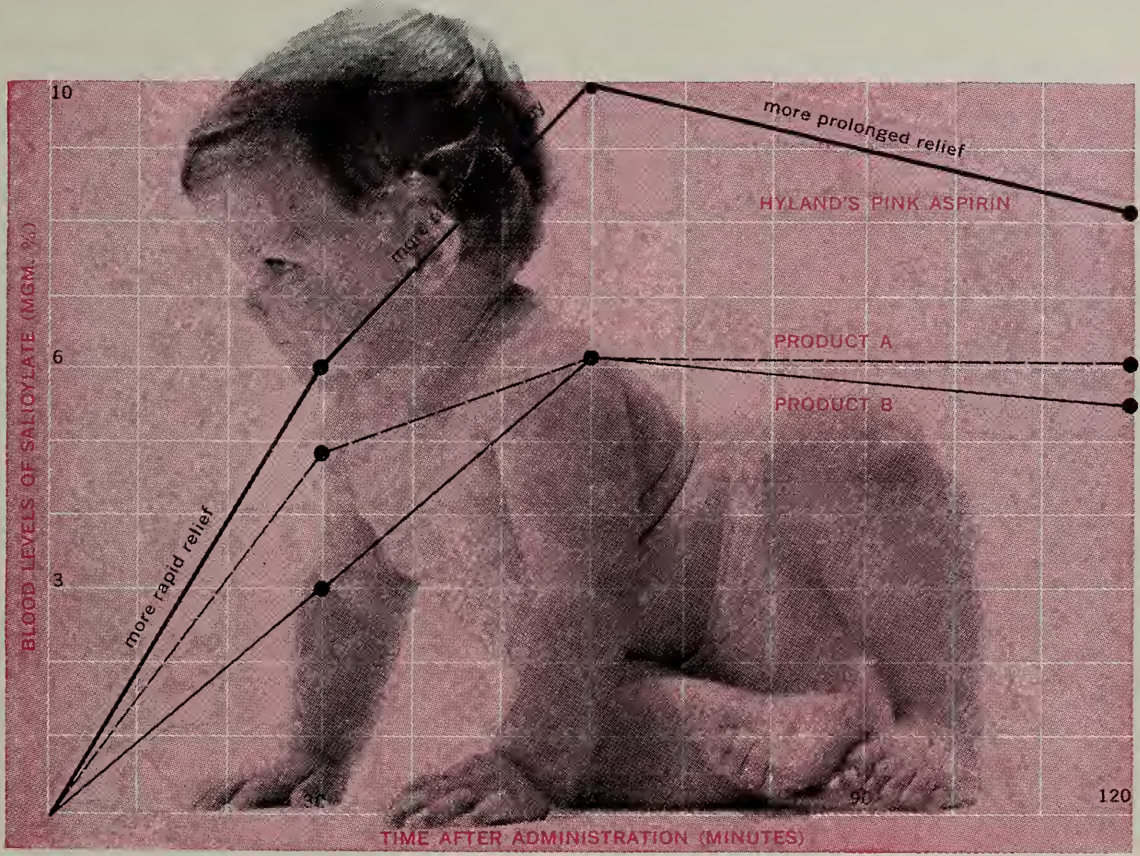

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Effectiveness of Anti-Fever Drugs

The anti-fever drug salicylamide offers some advantages in administration but is no more effective than acetylsalicylic acid in combating high temperatures in young children. Writing in the August 9 issue of the *Journal of the American Medical Association*, Drs. Alfred J. Vignec and Mary Gasparik, New York City, said, "salicylamide suspension proved superior to aspirin in ease of administration, better acceptability, and control of dosage." They also observed that both drugs "controlled fever equally well and with the same number of doses."

Salicylamide's advantage of easy administration, the physicians feel, eliminates two of the basic undesirable attributes of acetylsalicylic acid in the pediatric field. These are taste, and the difficulty in preparing a stable liquid preparation for small children who cannot take or who resist medicaments in tablet form.

Adding flavors to acetylsalicylic acid to improve the taste inevitably raises the problem of tempting the youngsters to regard the drug as candy, with possible serious consequences through overindulgence. When tablets are broken or crushed for administration, accuracy of dosage is lost and what remains is a gritty substance, difficult to administer.

The comparative study of the two drugs included 512 patients under the age of three years. Their only clinical symptom at the time of initial examination was pyrexia.

Results of the test showed that control of fever was gained in 42.3 per cent of the patients.

A comparison of the drugs indicates that salicylamide was effective in 42.9 per cent of those cases and control was obtained in 45.6 per cent of the patients receiving acetylsalicylic acid.

The physicians said that failure to reduce the temperature "occurred more frequently with the salicylamide trials than with aspirin." They also pointed out that in the event of failure by either drug to stabilize the patient after three or four trials, other treatment was introduced.

Throughout the course of the study, the physicians said, "neither salicylamide nor aspirin produced any evidence of sensitivity or toxicity."

The data gained from the study "seems to indicate that aspirin could produce greater drops in temperature and control pyrexia of higher degree than could salicylamide," they said.

To prove this point conclusively, the physicians feel that a more extensive study is needed where a balancing of cases could be achieved by alternating the drugs on the basis of starting temperatures.

Freedom for Medicine

The president of the American Medical Association recently said, "medicine is interdependent with the business and economic life of the nation and is caught up in all the countless cross-currents of public interest, public opinion, and political action."

This, he said, "creates a variety of problems arising from different viewpoints and ideologies, but it also presents many challenging opportunities for leadership, cooperation, and understanding."

These feelings were advanced by Dr. Gunnar Gundersen, La Crosse, Wisconsin, in an article appearing in the seventy-fifth anniversary edition (July 12) of the *Journal of the American Medical Association.*

Despite this interdependence, the physician said, "the future of American medicine is bright, if we can continue to work in an atmosphere of freedom motivated by the dual spirit of enterprise and cooperation."

He noted that this atmosphere of freedom has enabled medical science to advance "more in the past century than it had in the previous 3,000 years."

In discussing these accomplishments, Dr. Gundersen called particular attention to:

—the discovery that bacteria and other living organisms cause infectious diseases.

—insects, parasites, and other animals transmit disease.

—immunization and quarantine procedures which have helped to prevent disease.

—the development of sulfonamides and antibiotics to combat pneumonia and other bacterial infections.

—use of chemicals and hormones to combat tuberculosis, malaria, high blood pressure, arthritis, and other chronic ailments.

—development of antihistamines to fight allergies.

—use of tranquilizing drugs in combating mental disease and alcoholism.

—reduction of diseases of deficiency with the use of vitamins.

This medical progress, Dr. Gundersen said, "has made drastic cuts in the incidence and death rates of many diseases which once were serious health problems. It has increased the average life expectancy at birth almost 23 years since 1900."

In the future, the American Medical Association president expects medical emphasis to shift from the infectious communicable diseases to the chronic or degenerative diseases which take their toll in later life.

Among these he listed: Heart disease, arteriosclerosis, high blood pressure, cancer, arthritis, and similar ailments.

Dr. Gundersen also feels that increased attention will be focused on neurological diseases, mental

(Continued on Page 76)

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1. Weinberg, A., and Werner, W. E. F.: Am. Pract. & Digest Treat. *6*:580 (April) 1955.
2. Codling, J. W., and Lowden, R. J.: Northwest Med. *57*:331 (March) 1958.

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Freedom for Medicine

(Continued from Page 70)

illness, emotional disorders, and respiratory ailments, such as the common cold, hay fever, asthma, and sinusitis.

He said "new developments in electronics and atomic medicine will reveal a multitude of facts concerning cardiovascular diseases, cancer, mental and nervous disorders, and various chronic ailments."

The future, the physician said, "will see even greater emphasis on disease prevention, maintenance of good health, and effective rehabilitation of the disabled."

"Modern medicine has progressed over the years not simply through its own efforts but also by virtue of the help and cooperation given by the many segments of American life."

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Grayson, L. D.: Am. Pract. & Digest Treat. 7:269, 1956.

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1. Bleiberg, J.: J. Med. Soc. New Jersey, Aug. 1957.
2. Weissberg, G.: Clinical Medicine, Feb. 1958.

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Medicine and Religion Fight Alcoholism

Medicine and religion have joined forces in a concerted effort to stamp out alcoholism.

"With the possible exception of mental illness, no single bodily disease is receiving so much concurrent attention from medicine and religion as is alcoholism," according to a special article in the July 19 issue of the *Journal of the American Medical Association.*

This close rapport of clergymen and physicians has brought about a beneficial interchange of attitude and action toward the alcoholic. It is now realized "that the moral implications of alcoholism are primarily effects rather than causes of the disease," the article pointed out.

Compulsive drinking "is immune to punishment and sermonizing." Alcoholism "is a disease which is best assailable under a compassionate and concerted attack by many segments of society." One reason that alcoholism is such a difficult disease is that its exciting agent, alcohol, is a two-faced creature—a liquid that holds both good and evil, that can provide release or can enslave.

"Drink has taken five million men and women in the United States . . . and new acquisitions are going on at the rate of 200,000 a year."

"The disease that lurks in alcohol is a fickle-tyrant—choosing, unexplainably, the one drinker out of every 16 over whom it is able to exert complete control," the article stated.

Attention was also called in the article and accompanying editorial to the fact that the great majority of drinkers cannot acquire this sickness no matter how hard they may try.

Alcoholism, like cancer, the article said, "cannot be implanted in simply anyone by physiological means alone."

There is no known cause of alcoholism, no specific treatment, no foolproof method of picking out victims in advance. "An alcoholic's proneness to the disease is a secret between him and the bottle," said Dr. Marvin Block, Buffalo, New York, chairman of the American Medical Association's committee on alcoholism.

In the same article, Dr. Gunnar Gundersen, La Crosse, Wisconsin, president of the American Medical Association, said "the physician can restore the alcoholic's physical health, calm him mentally, and at the same time help him to meet basic human problems."

The ultimate solution, he added, may have to come from the patient's religious counselor, spouse, employer, or whatever source might hold the trump card in an individual case.

There is evidence already, the article continued,

(Continued on Page 102)

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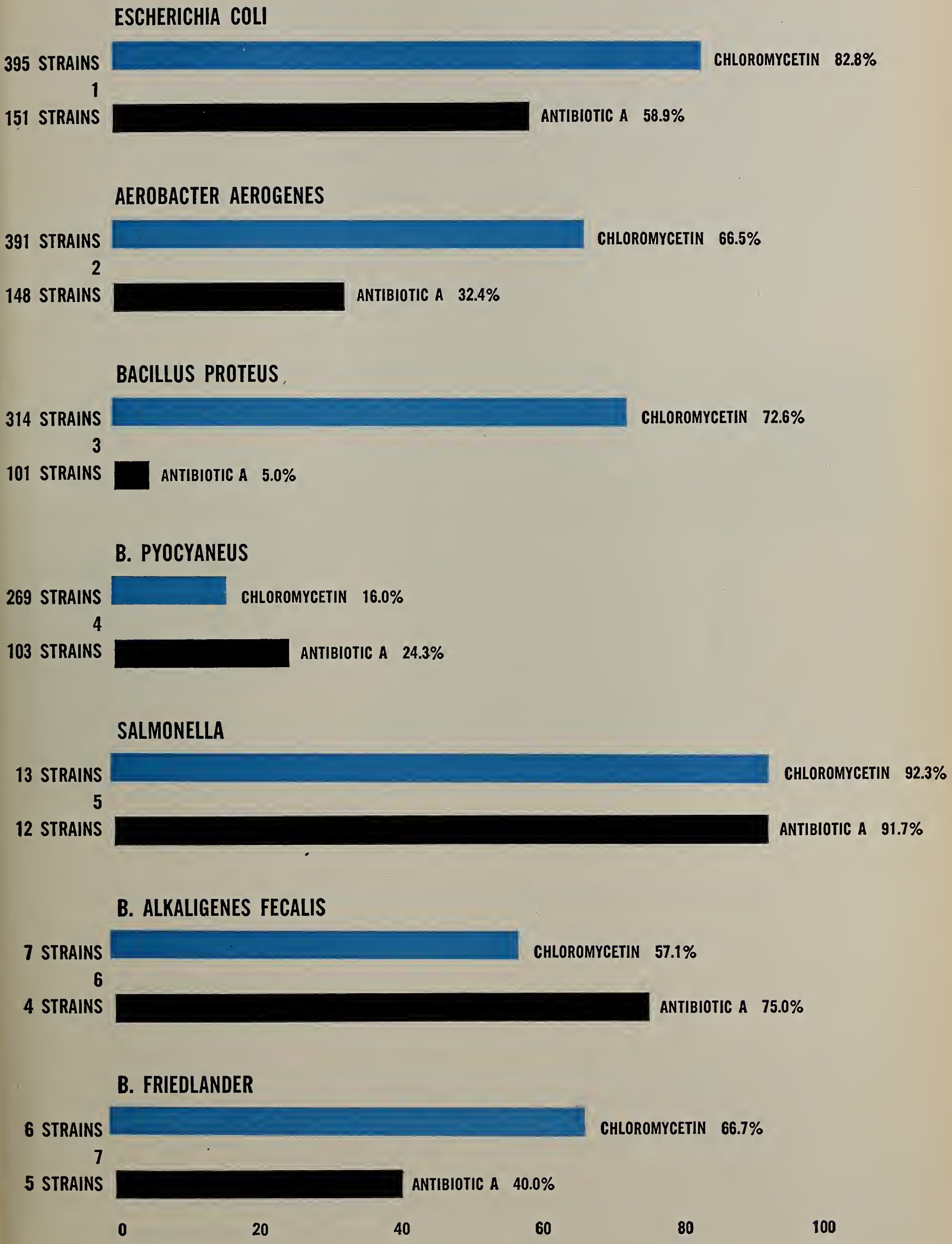

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*Adapted from Schneierson.[1]

Correction

July 21, 1958

The Editor, CALIFORNIA MEDICINE:

The item, "Power Mower Safety Rules," on pages 58 and 64 of CALIFORNIA MEDICINE for July 1958, omits one very important safety rule.

> "*Always* remove the ignition wire from the spark plug of the engine, and short it to another part of the machine, before attempting any work on the machine."

The reason? All such equipment that I have seen has magneto ignition and uses a shorting clip to short the high tension wire at the spark plug. If this shorting clip is moved a bit it often becomes ineffective. This is apt to be overlooked and anything which may turn the crank shaft a bit may cause the magneto to put a spark through the wire and cause a charge of gas in the cylinder to fire. This can easily cost fingers, especially if the engine is hot from recent operation.

This holds true of edgers or any other magneto-ignited home-use gasoline engines.

Very truly yours,
JOHN H. SCHAEFER, M.D.

Copy to *Today's Health.*

* * *

July 28, 1958

John H. Schaefer, M.D.
6340 Maryland Drive
Los Angeles 48, California

Dear Doctor Schaefer:

Thank you for showing me your additional safety rule with regard to power mowers. I assume that the copy you sent to *Today's Health,* in which the article originally appeared, will bring about a suitable correction.

Very truly yours,
DWIGHT L. WILBUR, M.D., *Editor*

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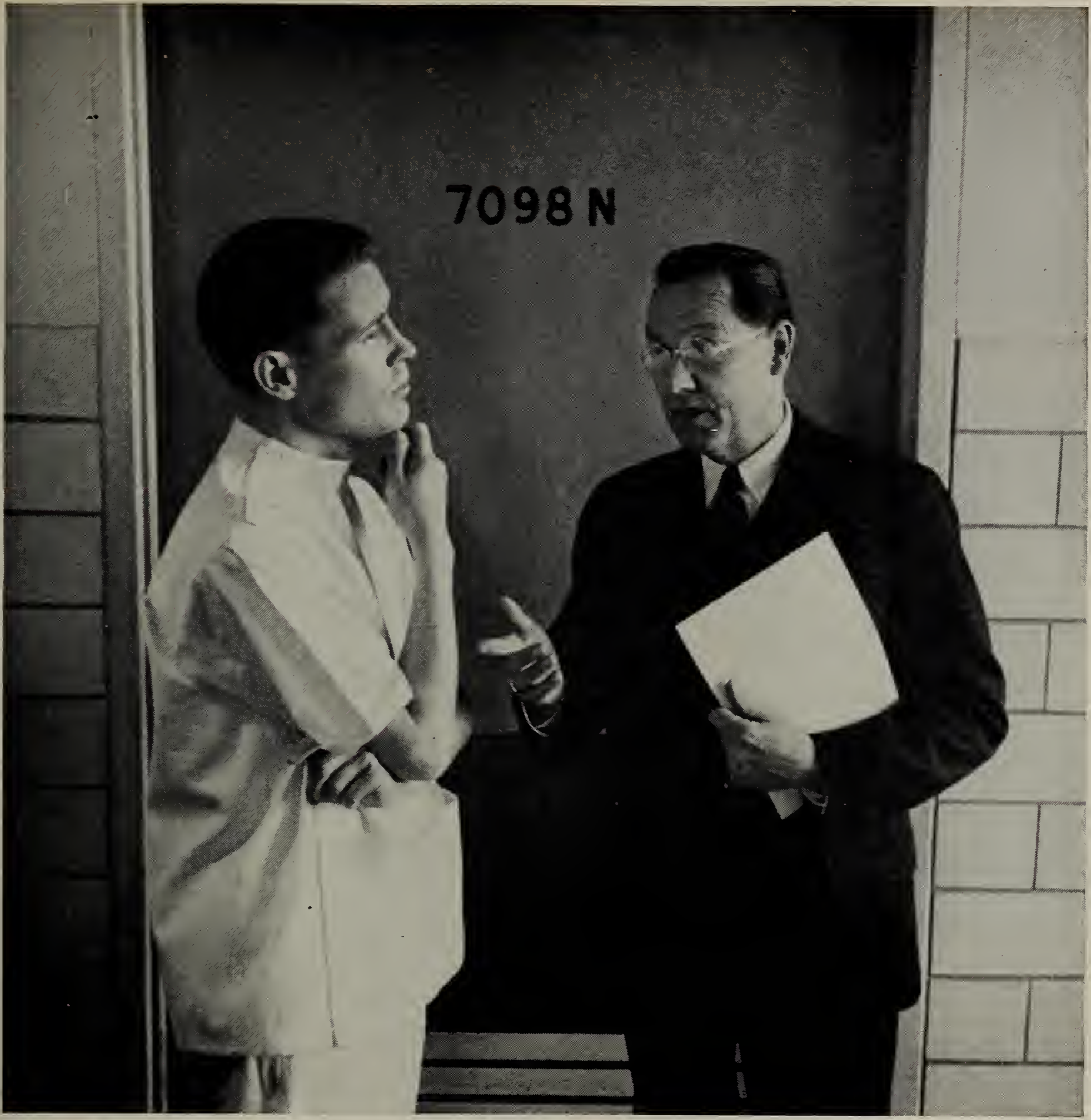

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BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE *are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.*

ADVANCES IN INTERNAL MEDICINE—Volume IX—1958. Editors: William Dock, M.D., State University of New York College of Medicine at New York City; and I. Snapper, M.D., Beth-El Hospital, Brooklyn; The Year Book Publishers, Inc., 200 East Illinois St., Chicago 11, Illinois, 1958. 311 pages, $8.50.

ALCOHOLISM—Arnold Z. Pfeffer, M.D., Formerly Associate Clinical Professor of Psychiatry, College of Medicine of New York University. Grune & Stratton, New York, 1958. 98 pages, $6.50.

ALCOHOLISM AND CALIFORNIA RELATED STATISTICS—1900-1956—State of California Department of Public Health—Prepared for the Division of Alcoholic Rehabilitation, John R. Philp, M.D., Chief. 127 pages. California State Printing Office.

CARE OF THE PATIENT IN SURGERY INCLUDING TECHNIQUES, THE (Third Edition)—Edythe Louise Alexander, R.N., B.S., M.A., Director of Nursing Service and Principal of the School of Nursing, Lutheran Medical Center, Brooklyn, N. Y. The C. V. Mosby Company, St. Louis, 1958. 840 pages, with 555 illustrations, including 5 in color, $12.75.

CEREBROSPINAL FLUID, THE, Production, Circulation and Absorption—Ciba Foundation, Symposium—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Little, Brown and Company, Boston, 1958. 335 pages, with 141 illustrations, $9.00.

CLINICAL OBSTETRICS AND GYNECOLOGY—June 1958— Volume I, Number 2—A Quarterly Book Series—Toxemias of Pregnancy—Edited by Louis M. Hellman, M.D.; and Fibromyomas of the Uterus—Edited by Robert A. Kimbrough, M.D. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y., 1958. $18.00 per year for four consecutive numbers, issued quarterly.

COCCIDIOIDOMYCOSIS—Marshall J. Fiese, M.D., F.A.C.P., Director of Health Services, Fresno State College; Clinical Instructor in Medicine, Stanford University School of Medicine; Consultant in Internal Medicine and formerly Chief, Medical Service, Fresno Veterans Administration Hospital. Charles C. Thomas, Springfield, Illinois, 1958. 253 pages, $9.50.

COMMUNICABLE DISEASES—A Bibliography of Internal Medicine—Arthur L. Bloomfield, M.D. The University of Chicago Press, 5750 Ellis Avenue, Chicago, Illinois, 1958. 560 pages, $10.00.

DEVELOPMENTAL POTENTIAL OF PRESCHOOL CHILDREN—An Evaluation of Intellectual, Sensory and Emotional Functioning—Else Haeussermann, Educational Consultant, Division of Pediatric Psychiatry, Jewish Hospital, Brooklyn, New York; with a Foreword by Joseph Wortis, M.D., and an Introduction by Herbert G. Birch, Ph.D. Grune & Stratton, Inc., 381 Fourth Avenue, New York, N. Y., 1958. 285 pages, $8.75.

DISEASES OF THE ESOPHAGUS—J. Terracol, Professor of the Faculty of Medicine of Montpellier, France, and Richard H. Sweet, Associate Clinical Professor of Surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1958. 682 pages, illustrated, $20.00.

ETIOLOGY AND TREATMENT OF LEUKEMIA—Proceedings of the First Louisiana Cancer Conference—Walter J. Burdette, Ph.D., M.D., F.A.C.S., Professor and Head of the Department of Surgery and Director of the Laboratory of Clinical Biology, University of Utah College of Medicine; Surgeon-in-Chief, Salt Lake County Hospital; Chief Surgical Consultant, Veterans Administration Hospitals; Salt Lake City, Utah. C. V. Mosby Company, St. Louis, Mo., 1958. 167 pages, $4.00.

HANDBOOK OF MEDICAL TREATMENT—Sixth Edition—Milton J. Chatton, M.D., Director of Medical Institutions, Santa Clara County, California; Superintendent of Santa Clara County Hospital, San Jose, California; Assistant Clinical Professor of Medicine, University of California School of Medicine, San Francisco; Sheldon Margen, M.A., M.D., Associate Research Biochemist, Department of Physiological Chemistry, and Clinical Instructor in Medicine, University of California School of Medicine, San Francisco; and Henry Brainerd, M.D., Professor of Medicine and Chairman, Department of Medicine, University of California School of Medicine, San Francisco, and Physician-in-Chief, University of California Hospitals, San Francisco. Lange Medical Publications, Los Altos, California, 1958. 569 pages, $3.50.

MEDICAL ELECTRICAL EQUIPMENT—Principles, Installation, Operation and Maintenance of Electrical Equipment Used in Hospitals and Clinics—Robert E. Molloy, M.B., F.F.A., R.C.S.; Philosophical Library, Inc., New York, 1958. 312 pages, with 238 illustrations, $15.00.

PHYSICAL DIAGNOSIS—14th Edition—F. Dennette Adams, M.D., Physician, Board of Consultation, Massachusetts General Hospital; Consultant to the Surgeon General, U. S. Army; Consultant to Boston and Bedford, Mass., Veterans Administration Hospitals. The Williams & Wilkins Company, Baltimore, 1958. 926 pages, $12.00.

PHYSICIANS HANDBOOK—10th Edition—Marcus A. Krupp, M.D., Associate Clinical Professor of Medicine, Stanford University School of Medicine, San Francisco; Director, Palo Alto Medical Research Foundation, Palo Alto; Norman J. Sweet, M.D., Associate Professor of Medicine, University of California School of Medicine, San Francisco; Ernest Jawetz, Ph.D., M.D., Professor of Microbiology and Lecturer in Medicine and Pediatrics, University of California School of Medicine, San Francisco; and Charles D. Armstrong, M.D., Assistant Clinical Professor of Medicine, Stanford University School of Medicine, San Francisco. Lange Medical Publications, Los Altos, California, 1958. 500 pages, $3.00.

PRACTICE OF NUCLEAR MEDICINE, THE—William H. Blahd, M.D., Chief, Radioisotope Service, Veterans Administration Center, Los Angeles, California; Franz K. Bauer, M.D., Chief, Outpatient Services, Los Angeles County Hospital; Associate Clinical Professor of Medicine and Coordinator of Radioisotope Research, University of Southern California School of Medicine, and Benedict Cassen, Ph.D., Chief, Medical Physics Section, Atomic Energy Project and Clinical Professor of Biophysics, University of California at Los Angeles School of Medicine. Introduction by Paul Aebersold, Ph.D., Assistant Director of Isotopes and Radiation, Division of Civilian Application, United States Atomic Energy Commission. Foreword by Joseph F. Ross, M.D., Associate Dean, Professor of Medicine and Radiology, School of Medicine, University of California at Los Angeles. Charles C. Thomas, Springfield, Illinois, 1958. 407 pages, $12.50.

PROGRESS IN CARDIOVASCULAR DISEASES—Progress in Cardiac Surgery—Edited by Charles Friedberg, M.D. A Quarterly Publication. Grune & Stratton, Inc., 381 Fourth Avenue, New York City 16. Volume 1, Number 1, 108 pages. Price: Subscription to Volume 1 (four successive issues) $8.00 in U.S.A., $10.00 elsewhere; single-issue price, $3.00.

READINGS IN MEDICAL CARE—Edited by the Committee on Medical Care Teaching of the Association of Teachers of Preventive Medicine. The University of North Carolina Press, Chapel Hill, 1958. 708 pages, $6.50.

ROENTGEN-DIAGNOSTICS—Progress Volume I—H. R. Schinz, R. Glauner, E. Uehlinger; with the collaboration of W. E. Baensch, J. E. W. Brocher, U. Cocchi, G. Glocker, W. Hess, R. Janker, O. Norman, R. Prevot, G. Schoch, E. Uehlinger, S. Welin, J. Wellauer, E. Zdansky. Translated from the German by James T. Case, M.D., D.M.R.E. (Cambridge). Grune & Stratton, Inc., New York, 1958. 623 pages, with 545 figures containing 892 illustrations, $35.00.

THERAPEUTIC USES OF ADHESIVE TAPE—2nd Edition—Johnson & Johnson, New Brunswick, New Jersey, 1958. 130 pages, distributed to physicians and athletic trainers, upon request. No price.

WAKING BRAIN, THE—H. W. Magoun, Ph.D., Department of Anatomy, School of Medicine, University of California, Los Angeles, California; Veterans Administration Hospital, Long Beach, California. Charles C. Thomas, Publisher, Springfield, Illinois, 1958. 138 pages, $4.75.

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Medicine and Religion Fight Alcoholism

(Continued from Page 86)

"that, while more effective alcoholism case-finding is bringing this illness out into the open, consumption of alcoholic beverages on a per capita basis is dropping sharply.

"A recent Gallup poll showed that since 1945 there has been a decline of 18 per cent in the ratio of alcoholic beverage consumers to total adult population."

With a promise of less drinking, more effective approaches to those who drink excessively, and better understanding of the disease through research, the outlook for the future is hopeful. These promises have a firm foundation in a war that has physicians fighting alongside citizens in virtually every field of endeavor.

This action was termed a program of total assault by Dr. Gundersen, who added, "Medicine is on the firing line against alcoholism."

In this country, about five billion man-days are lost each year through virus diseases. No other category of disease approaches this total in terms of human disability.—*Dr. Frank L. Horsfall, Jr., Rockefeller Institute for Medical Research.*

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  Basic Principles in General Surgery, Two Weeks, October 13
  Gallbladder Surgery, Three Days, November 3
  Surgery of Hernia, Three Days, November 6
  General Surgery, Two Weeks, November 10; One Week, October 27
  Fractures & Traumatic Surgery, Two Weeks, December 1
  American Board Review Course, Two Weeks, November 10
  Blood Vessel Surgery, One Week, October 20

GYNECOLOGY & OBSTETRICS—
  Office & Operative Gynecology, Two Weeks, October 13
  Vaginal Approach to Pelvic Surgery, One Week, October 6
  General & Surgical Obstetrics, Two Weeks, October 27

MEDICINE—General Review Course, Two Weeks, October 20
  Electrocardiography, Two-Week Basic Course, October 6
  Gastroscopy & Gastroenterology, Two Weeks, November 3
  American Board Review Course, One Week, September 29
  (Oversubscribed—Available again in Spring, 1959)

DERMATOLOGY—Clinical & Didactic Course, Two Weeks, November 3

UROLOGY—Two-Week Intensive Course, October 13
  Ten-Day Practical Course in Cystoscopy by appointment

RADIOLOGY—Diagnostic X-Ray, Two Weeks, December 1
  Clinical Uses of Radioisotopes, Two Weeks, September 29

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—from virtually any cause

- in pregnancy—pre- and postoperative states—gastroenteritis—alcoholism—cancer and chronic diseases
- control is achieved with low dosage—usually 15 to 20 mg. daily—and often within a half hour after the first oral dose

'Compazine' is remarkable for its freedom from drowsiness. Patients carry on normal activities and often experience an actual alerting effect.

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—always carry one in your bag

Also available:

Tablets, 5, 10 and 25 mg., in bottles of 50 and 500.
Spansule[†] *capsules,* 10, 15 and 30 mg., in bottles of 30 and 250.
Suppositories, 5 and 25 mg., in boxes of 6.
Syrup, 5 mg./teaspoonful (5 cc.), in 4 fl. oz. lightproof bottles.

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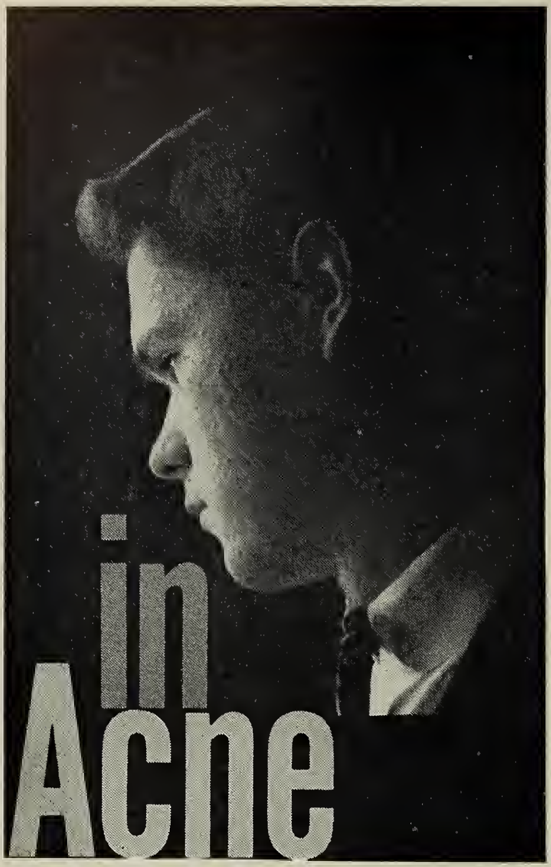
[★] T.M. Reg. U.S. Pat. Off. for prochlorperazine, S.K.F.
[†] T.M. Reg. U.S. Pat. Off. for sustained release capsules, S.K.F.



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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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American Medical Association Quarterly Legislative Review

The second session of the 85th Congress, beset with space age and other problems and operating in the charged atmosphere of an election year, found time to take up an unusual number of bills of interest to medicine. It passed more than a dozen. Just as notable were two bills that did not pass. While the Forand bill for a hospitalization program under social security failed to clear the House Ways and Means Committee, the committee did order the Department of Health, Education, and Welfare to make a thorough study of the problem of financing medical care of the aged, with emphasis on use of social security. Because the report is due by next February 1, the basic issue is almost certain to come to the front again early in the new Congress. Another major issue left hanging was that of tax-deferment on annuities for the self-employed —the Keogh bill. It went through the House by an overwhelming vote and won the support of 32 Senators, two factors that suggest it may be enacted next year.

In the following pages we review briefly the provisions of all major health bills enacted in both sessions of the 85th Congress, and outline the prospects for the more important measures that were left by the wayside.

* * *

MEDICARE APPROPRIATIONS
(Public Law 85-724, Aug. 22)

Congress took a long look at the Medicare program, now nearing its second anniversary, and decided that the civilian phase of the program had to be curtailed in favor of greater use of military facilities. The House first trimmed $10.2 million from an admittedly slim budget of $70.2 million, and then wrote into the Defense Department appropriation a section that would have prevented the services from asking for any supplemental appropriation for the entire fiscal year or using other funds. When it reached the Senate, Medicare and Defense officials joined with the American Medical Association and others in a plea for restoration of funds and elimination of the destructive section. This was accomplished through an amendment sponsored by Senator Knowland (R., Calif.). In the ensuing conference, language was written in a report which, while not having the full force of law, nonetheless directed the military to start cutting back on some aspects of civilian Medicare. To this end, the Office for Dependents Medical Care announced new restrictions effective this fall. They are aimed at higher military facilities utilization, such as requiring dependents living with sponsors to use military resources unless they are not available.

(Continued on Page 16)

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sickness"
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In 941 cases[1,2] effective in all but 17. Two timed-release tablets at bedtime start to work in the early morning and reach maximum potency at normal waking hour. BENDECTIN then provides exceptional relief of nausea and vomiting by three distinct and complementary actions. 1. **Antispasmodic**—Bentyl 10 mg.—relaxes G-I smooth-muscle spasm; 2. **Antinauseant**—Decapryn 10 mg.—centrally effective . . . combats histamine-like metabolites often present in blood stream during pregnancy; 3. **Nutritional supplement**—pyridoxine 10 mg.—just the amount necessary to help control "morning sickness."

1. Nulsen, R. O.: Ohio State M. J. 53:665, 1957. 2. Personal communications, 1956-57.

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American Medical Association Quarterly Legislative Review

(Continued from Page 12)

MEDICARE SHUTDOWN EARLY IN 1959 SEEN AS POSSIBILITY

Medicare officials, after another look at the account books, see the possibility of a shutdown of the civilian phase of the program early in 1959. The reason is relatively simple: The $72 million appropriated by Congress for the fiscal year will not be adequate. And Senate and House conferees agreed that the armed forces should not spend more than that amount. Maj. Gen. Paul I. Robinson, who retired this week as head of the Office for Dependents Medical Care, says one solution lies in Congress changing its mind and voting more funds after it convenes January 7. Another possibility is for the Defense Department to use other funds to make up its deficit, then explain to Congress next session why its instructions could not be followed.

ODMC, in further elaborating on its new restrictions on Medicare use in civilian facilities (brought on by the belt-tightening in Congress), said these surgical procedures would be allowed: (1) Bona fide surgical emergencies which cannot be handled on an out patient basis, e. g., perforated ulcer, bowel obstruction, (2) acute surgical conditions in which patient is in clinical need of hospitalization without delay, e. g., acute appendicitis, strangulated hernia, pelvic abscess, and (3) injuries of such clinical severity as to require hospitalization but only for treatment of the acute phase. Elective surgery is ruled out, including interval appendectomies, cosmetic surgery, tonsillectomies, routine hysterectomy and uncomplicated hernias.

UNION-MANAGEMENT HEALTH AND WELFARE PLANS
(Public Law 85-836, Aug. 28)

To correct abuses in health and welfare plans, Congress after considerable debate voted a measure requiring both labor and management health and welfare plans to make annual financial reports to the Secretary of Labor. It exempts plans with fewer than 25 members. Fines as high as $10,000 or five years imprisonment are provided for falsification of reports.

PRESIDENT CRITICIZES UNION WELFARE FUND ACT AS INADEQUATE

President Eisenhower has signed into law a bill providing a limited amount of publicity for union-management welfare funds (medical plans included), but at the same time he criticized the legislation as too weak and said it would be ineffective unless tightened up by the next Congress.

(Continued on Page 18)

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Sequestering of antibiotic molecules by free metallic ions, always present in the intestinal tract, can deprive patients of a full therapeutic dose. The three active carboxyl radicals which protect the action of ACHROMYCIN V trap these free cations and allow uninhibited antibiotic absorption.

provides for peak antibiotic action

At the site of infection where, in essence, all antibiotics are proved, ACHROMYCIN V combats a wide range of pathogens under optimal tissue conditions. Citric acid, a factor of medically established value in the natural acid-base regulating mechanism of the G.I. tract, facilitates a more complete, and rapid antibiotic action.

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Professional inquiries should be addressed to Keith A. Seaton, Registrar, Devereux Schools in California, Santa Barbara, California; eastern residents address John Barclay, Director of Development, Devereux Schools, Devon, Pennsylvania.

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Fred E. Henry, S.T.D.
J. Clifford Scott, M.D.

American Medical Association Quarterly Legislative Review

(Continued from Page 16)

Under the law the funds are required to register with the Secretary of Labor and make annual reports, which will be filed with the secretary and made available to any beneficiaries. In a statement Mr. Eisenhower declared:

1. The act requires only summary statements of many important aspects, "making it possible to conceal many abuses."

2. No agency of government is authorized to provide uniform interpretation of the bill's technical terms, and "the chaos that will result is obvious." Failure to designate an agency plan administrators can consult for reliable and authentic opinions, and for report forms, "enables corrupt administrators to hide abuses, blocks beneficiaries from receiving adequate information, and subjects administrators to uncertainties in compliance."

3. The bill's reliance solely upon individual employees to compel compliance through court proceeding is most unrealistic. "Employee suits alone are inadequate as enforcement remedies. Unaided by governmental authority to conduct investigations and institute litigation, individual employees, without financial resources or legal experience, can be easily intimidated, made subject to reprisals and discouraged from taking effective action."

4. The bill fails to give the Secretary of Labor either investigatory or enforcement powers with respect to reports filed with him.

5. There is no provision for dealing directly with "the most flagrant abuses," such as embezzlement and kickbacks, once they are uncovered.

In conclusion the President said: "Not only did the Congress fail to appropriate any money to administer the custodial and other functions of the secretary under the bill, but the annual financial reports will not have to be furnished until as late as May, if the plans are on a calendar year basis or for a period of 120 days after the completion of the fiscal year if they operate on a fiscal year basis."

SOCIAL SECURITY AMENDMENTS
(Public Law 85-840, Aug. 28)

As it has done every election year since 1950, Congress again amended the Social Security Act. It increased Old Age, Survivors and Disability Insurance benefits by 7 per cent, in response to demands that benefits keep pace with the cost of living. It provided an additional $197 million for public assistance recipients, and gave states greater flexibility in use of federal funds for financing the

(Continued on Page 22)

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Supplied: tiny pink-and-blue tablets, bottles of 25 and 100. Bonadoxin Drops in 30 cc. dropper bottles.

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Meclizine Dihydrochloride...8.33 mg.
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under 6 months	0.5 cc.	← 2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years	1.5 to 2 cc.	
2 to 6 years	3 cc.	
adults and children over 6 years	1 teaspoon (5 cc.)	

Supplied:
fruit-flavored, clear green syrup in 30 cc. dropper bottles.

References: 1. Drugs of Choice 1958-1959, St. Louis, C. V. Mosby Company, 1958, p. 347.
2. Goldsmith, J. W.: Minnesota Med. *40*:99 (Feb.) 1957.

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SCIENCE FOR THE WORLD'S WELL-BEING

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(Continued from Page 18)

medical care of the aged, blind, the disabled, and dependent children. To finance the liberalizations, the law increases the taxable base from $4200 to $4800 of gross employment earnings and raises the tax in 1959 from 2¼ per cent to 2½ per cent for the employer and employee, and from 3⅜ per cent to 3¾ per cent for the self-employed. Additional increases are scheduled for 1960, 1963, 1966 and 1969. By 1969, the self-employed will be paying 6¾ per cent of earnings.

Congress left the door ajar for consideration by the next Congress of bills using the social security system to provide hospital and medical care for OASDI beneficiaries. An articulate minority wanted this enacted this year via the proposal of Rep. Aime Forand (D., R.I.), but Congress decided against it. However, the House Ways and Means Committee directed the administration to make a study and report by next February on the various possibilities for financing medical care for the aged, with particular emphasis on the possible practicability of increasing OASDI taxes and using the money to pur-

(Continued on Page 26)

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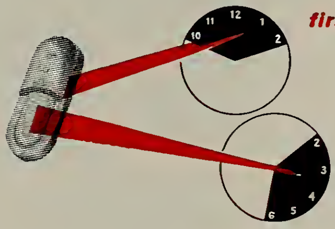

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(Continued from Page 22)

chase health insurance on retirement. The AMA took a strong stand against using the social security system to provide such care, viewing it as a beginning of national compulsory health insurance.

WHITE HOUSE CONFERENCE ON AGING
(Signed Sept. 2, Awaiting P. L. No.)

The President is instructed to call a White House Conference on Aging in January, 1961, by a measure passed late in the session. This national meeting will bring together federal, state and local leaders working in the field of aging. Their objective: To arrive at facts and recommendations on the utilization of skills, experiences and energies, and the improvement of the conditions of older people. A final report would be submitted to the President within 90 days after the conference. A series of state-organized meetings would precede the 1961 conference. To help the states finance these meetings, the law provides up to $15,000 a state with a minimum of

(Continued on Page 30)

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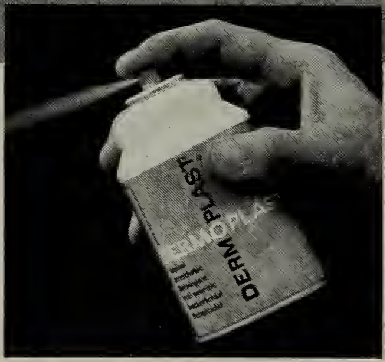

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$5,000. These figures, reduced from the original $50,000 per state, were used with the anticipation that states would also participate substantially in the financing. The AMA gave this legislation its full support; author of the bill was Rep. John Fogarty (D., R.I.).

CHEMICAL ADDITIVES IN FOOD
(Awaiting Presidential Signature)

In an 11th-hour action, the Senate passed a House-approved bill on the last day of the session which prohibits use of chemical additives in foods until their pre-testing has been approved by the Food and Drug Administration. Elaborate provisions are made for appeals to federal decisions.

HEALTH APPROPRIATIONS
(Public Law 85-580, Aug. 1)

In response to appeals from a number of sources, the 85th Congress set a new high in money voted for the Department of Health, Education, and Welfare, particularly for the U. S. Public Health Service. The latter now is spending at the rate of close to three quarters of a billion dollars a year. Last year PHS received from Congress approximately $562 million; this year's total is $745,747,000. Members of Congress find it difficult to vote against more funds for medical research and a myriad of other health programs, once health-oriented House and Senate committees have agreed on certain figures for the ensuing year. Research money for the seven institutes was increased nearly 40 per cent over last year, while the Hill-Burton hospital con-

(Continued on Page 34)

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1. May Plaquenil be used concomitantly with steroids and salicylates?

Yes. Tolerance to the three drugs when used together is not altered.

2. When may steroid medication be reduced after initiation of Plaquenil treatment?

Since the beneficial effects of Plaquenil therapy are not noted for a period of at least four to six weeks, full maintenance dosage of the steroid should be continued during this period of time. Steroid therapy thereafter may be gradually reduced.

3. May steroid therapy be withdrawn abruptly upon institution of Plaquenil therapy?

No, except when steroids have been administered for a period of about five days or less. When steroids have been given for longer periods, abrupt withdrawal is contraindicated to prevent the possibility of adrenocortical insufficiency.

4. How may steroid medication be reduced gradually?

When the gradual reduction of steroid dosage is indicated, this may be accomplished by reducing every four or five days the dose of cortisone by no more than 5 to 15 mg., of hydrocortisone 5 to 10 mg., and of prednisolone and prednisone 2.5 to 5 mg.

5. May salicylate medication be reduced gradually or withdrawn abruptly during Plaquenil therapy?

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Onset of effect is slow, requiring at least four to twelve weeks to become apparent. For optimal results at least six months' therapy is advisable.

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[1] Schoch, A. G., and Alexander, L. J.: The Schoch section, *Bull. A. Mil. Dermatologists* 5:25, Nov., 1956.

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struction program received a boost of close to 55 per cent. If one is to judge from a recent study group of HEW, the peak of spending in the health field hasn't yet been reached. Congress also voted $6.9 million for the long-sought new quarters for the National Library of Medicine.

HILL-BURTON AMENDMENTS
(Public Law 85-589, Aug. 1 and Public Law 85-664, Aug. 14)

Because a full year's notice is deemed necessary in future planning, Congress voted a 5-year extension of the Hill-Burton hospital construction program. The act otherwise would expire next June. In a separate action, Congress amended the act to permit for the first time Hill-Burton loans at the same rate of interest the government pays for its own borrowing. Under the loan act, an applicant would have to comply with all H-B regulations, the same as regular H-B applicants. The extension bill is Public Law 85-664, and the loan act, Public Law 85-589. The AMA testified in support of the Hill-Burton extension.

DEFENSE REORGANIZATION
(Public Law 85-599, Aug. 6)

At the prodding of the House Armed Services Committee, the Defense Department is finally reorganizing. The number of Assistant Secretaries of Defense, which Congress felt had grown too large, was trimmed back by one. The affected post in all likelihood will be that of Assistant Secretary for Health and Medical Affairs, which would be downgraded to that of special assistant. The AMA fought hard to have the act make clear that this post would be saved, and it continues hopeful that something can be worked out before the act goes into effect in January.

PUBLIC HEALTH SCHOOL GRANTS
(Public Law 85-544, July 22)

Eleven schools of public health were promised a total of $1 million annually in federal grants to assist them in professional training, specialized consultative services and technical assistance with the states. The final act was simply an authorization. Efforts were made late in the session by the Senate to add $1 million to a supplemental appropriation for a number of agencies. This item was knocked out in conference, which means that funds will not be available until the next Congress acts.

(Continued on Page 40)

SUMMARY OF REPORTS

No. of Patients	Results	Percent
6,553	Excellent	31.0%
10,843	Good	51.3%
2,703	Fair	12.8%
1,033	Unsatisfactory	4.9%

(Total Number of Side Effects: 638 [3.0%])

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(Continued from Page 34)

CIVIL DEFENSE GRANTS
(Public Law 85-606, Aug. 8)

To bolster sagging state civil defense programs, Congress voted grants to the states for purchase of radiological instruments, personal equipment for state and local civil defense workers and for administrative and personnel expenses. Amounts for the first category would not exceed $35 million, for the second category, not more than $2 million, and for the third, not over $25 million.

MILITARY AND VA PAY SCHEDULES
(Public Law 85-422, May 20, and Public Law 85-462, June 20)

General pay raises for the military (P. L. 85-422) included the same increases for physicians in the services. The law also retained the incentive pay schedule for doctors in uniform which has been in effect since 1947. Congress, in a separate act (P. L. 85-462), also approved salary increases for physicians in the Veterans Administration. It voted down a provision that would have given VA optometrists the same professional status as physicians and dentists.

RESEARCH FACILITIES EXTENSION
(Public Law 85-777, Aug. 27)

Two years ago Congress voted a new program of grants to help medical schools and similar facilities doing research in various crippling and killing diseases to construct laboratories and similar buildings or to remodel existing structures. The program was to run for three years, with an annual appropriation of $30 million. With a backlog of applications, the administration sought an extension for another three years. It also asked for a clarification of "multi-purpose" facilities. In the process, the bill was amended in committee so that money available would have been available for both research and teaching facilities. This back-door approach to medical school aid later was dropped by the committee, because it was felt that it would jeopardize passage of the simple extension.

DOCTOR DRAFT EXTENSION
(Public Law 85-62, June 27, 1957)

Under this act passed in the first session, selective service has authority until July 1, 1959 to call certain physicians up to age 35 for military service. Only those doctors with obligations under the regular draft and who have been deferred for any reason

(Continued on Page 46)

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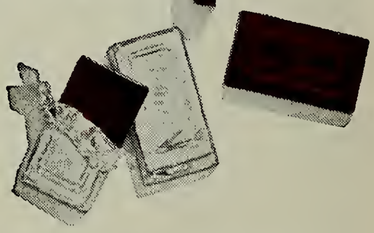

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*L. O. Randall and J. Selitto, *J. Am. Pharm. Assn. (Sc. Ed.)*, 47:313, 1958.
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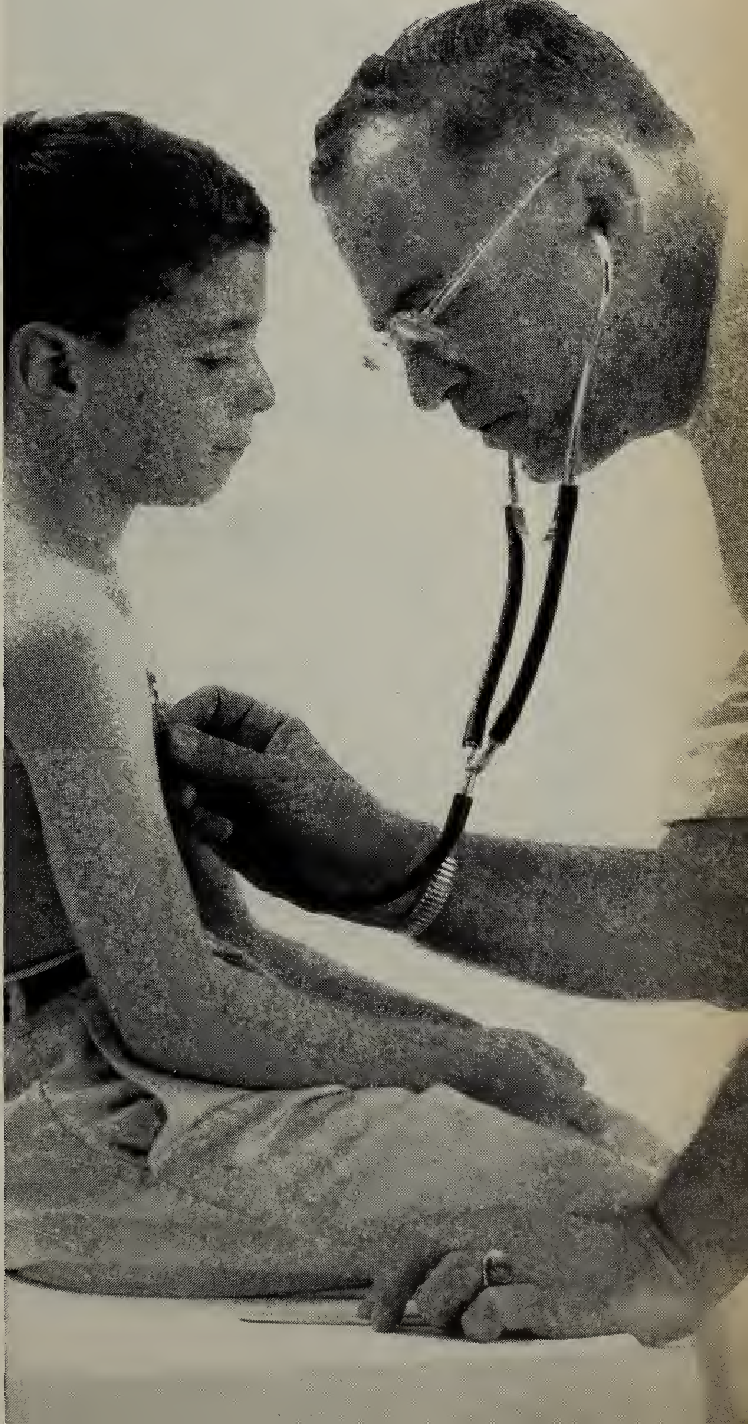

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may be called. Although the military has been getting enough doctors through new graduates and volunteers, it expects to ask for another extension next year.

JENKINS-KEOGH TAX DEFERRAL
(Died in Senate Finance Committee)

The drive to give the self-employed equal treatment with the employed in setting aside tax-deferred sums for retirement plans moved closer than ever to enactment. A bill passed the House late in July with only a smattering of opposition. But it died in the Senate Finance Committee; a major factor was Treasury Department insistence it would result in a large tax revenue loss. AMA, in concert with the American Thrift Assembly, pressed hard for enactment. New efforts to get the measure passed in the 86th Congress are being planned.

COMMUNITY FACILITIES LOANS
(Killed in House)

A bill that started out an as anti-recession measure lost steam as it progressed in Congress. It provided for low-interest loans to states and communities for a wide range of public works, including construction of community hospitals. The measure was voted down in the House after it had passed the Senate.

MEDICAL SCHOOL CONSTRUCTION AID
(Died with the Congress)

Bills to authorize one-time grants for new and existing medical schools to build classrooms were pending in both House and Senate at adjournment. Extensive hearings were held by the House interstate health subcommittee. No bill was reported to the floor because of (1) concern over the segregation issue, (2) a question of whether the states have exhausted all resources, and (3) a reluctance of some committee members to spend the money now. The AMA supported one-time grants in its testimony.

CIVIL AVIATION MEDICINE
(Died with the Congress)

Efforts to establish a Civil Air Surgeon with broad authority in civilian air safety failed to pass. But with creation of the Federal Aviation Agency, administration assurances have been given that the needs of aviation medicine will be considered in setting up the new agency. The AMA was a strong supporter of the idea of a Civil Air Surgeon.

(Continued on Page 56)

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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956

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Physicians who are interested in the legal and economic aspects of organized labor in today's society are invited to read the new book: "Labor Unions and Public Policy."

The book presents four studies by the American Enterprise Association.

The authors are: Dr. Edward H. Chamberlin, chairman of the Harvard Department of Economics; Dr. Philip D. Bradley, for many years a member of the department of ecomonics at Harvard and now a visiting professor at the University of Virginia; Gerard D. Reilly, Washington attorney and current chairman of the labor law section of the American Bar Association, and Roscoe Pound, former dean and professor emeritus of the Harvard Law School.

The studies analyze the legal, economic, and sociologic aspects of the power position of organized labor.

The book may be obtained from the American Enterprise Association, which was organized in 1943 by a group of industrial leaders, members of Congress, and representatives of the academic world. The association's address is: 1012 14th Street, N.W., Washington 5, D. C.

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American Medical Association Quarterly Legislative Review

(Continued from Page 46)

VETERANS HOSPITALIZATION

(Died with the Congress)

Late in the session as a windup to lengthy hearings on veterans entitlement to VA hospitalization, the House Veterans Affairs Committee reported out an omnibus hospitalization bill. The measure had as its major objective the opening of some 5,000 additional beds which the committee maintains the Budget Bureau is holding back on. It was reported too late for final action. The AMA testified in favor of a clear spelling out by Congress of veterans entitlement to federal care.

NURSING HOME MORTGAGE GUARANTEES

(Died in House)

Efforts to provide new capital for proprietary and non-proprietary nursing homes through FHA-type mortgage loan guarantees failed of passage. The provision, strongly endorsed by the AMA, was part of an omnibus housing bill that failed to pass the House under suspension of rules, after Senate approval. Last-minute efforts to separate the nursing home portion from the bill and have it enacted also failed.

NO ACTION

Medical Care for Aged (Forand's H. R. 9467); Grants and Scholarships for Nursing (H. R. 306); National Compulsory Health Insurance (H. R. 3764); Health Insurance Pooling (H. R. 6506 and H. R. 6507); Rehabilitation (H. R. 10608 and S. 3551).

American Medical Association Plans Group Practice Roster

The A.M.A.'s Council on Medical Service has been in the process of compiling information on group practices throughout the country and eventually plans to publish a directory of these groups. To date the Council has information on 989 such groups located in the United States, Hawaii and Canada. Verification sheets have been sent out to those groups already on file. Physicians who practice in groups of two or more—who have not received a check sheet—are invited to send the following information to the Council: Group practice name, address, office building (indicate whether rented or owned), number of physicians, and the specialties represented.

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Medicine and Industry Work For the Common Good

Enterprise and cooperation has been the dominant theme by which medicine and industry have worked together to solve their common problems.

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This "togetherness" was described in a series of articles which appeared in the July 12 issue of the *Journal of the American Medical Association.*

According to Frank Stanton, president, Columbia Broadcasting System, one of the prime examples of these mutual efforts has been in the field of communications.

He said "every discovery that has been made in medicine—as in any science—and that has been put to the service of man has resulted from a whole succession of scientists building upon the accumulated discoveries of others."

Prior to the time of adequate communications, scientists spent endless time in needless experimentation and groping for knowledge already arrived at. You might say "scientists spent precious years in rediscovery."

Modern communications have eliminated "life-wasting delays in the broad application of new cures and preventives to diseases that contributed heavily to the mortality toll."

Another practical example of industry and medicine working together for the common good is the Dodrill-GMR mechanical heart which has been used successfully in many heart operations.

Developed by the Chrysler Corporation, the mechanical heart takes over the heart's pumping action temporarily while a patient is undergoing heart surgery.

According to L. L. Colbert, president, Chrysler Corporation, the perfected machine came as a result of the combined efforts of Dr. F. D. Dodrill, who developed the idea, and the Chrysler engineers who built the mechanical heart.

Highway safety programs are another joint venture of industry and medicine, Colbert said. He noted that Chrysler and other members of the automobile industry are supplying funds and cooperating with Cornell University in a program designed to produce new information vital to the industry in furthering safety advances.

To date, he said, "such safety devices as padded instrument panels, steering wheel hubs, and safety door latches" have been perfected.

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(Continued in Back Advertising Section, Page 85)

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Fungus Disease in Northern California

LOWELL A. RANTZ, *M.D.*, CARLYN HALDE, *Ph.D.*,
DONNA NEWSTRAND, *A.B.*, and DIANA KETTNER, *B.S.*, San Francisco

• A systematic search for disease caused by fungi was made in a group of patients from northern California.

Superficial mycotic infection was diagnosed frequently. Systemic fungus infection was found in approximately 0.6 per cent of an unselected group observed at Stanford University clinics—coccidioidomycosis or actinomycosis in almost all cases.

Clinically unsuspected fungus infection was rare. Various species of Candida were frequently recovered, particularly from debilitated patients who had received antimicrobial therapy. Only rarely could these organisms be conclusively demonstrated to have caused serious disease.

LITTLE INFORMATION is available on the importance of fungi as a cause of disease in northern California. Coccidioidomycosis is a commonplace in the southern part of the Central Valley but other mycotic disease has not seemed to present a significant clinical problem. This study was designed to obtain information as to the incidence of infection with organisms of this group in the northern part of the state.

PLAN OF STUDY

Materials were obtained from two sources. Information about the project was disseminated widely in the San Francisco Bay Area and assistance was offered gratis to all physicians and hospitals in the area. It was hoped that the mycologic laboratory of Stanford University School of Medicine would be employed as a reference center and that information would be obtained on fungus disease in other institutions. This phase of the program was successful in that 29 hospitals contributed materials from 185 patients in nearly all of whom systemic fungus infection was suspected. Also many specimens from patients with various forms of epidermophytosis were received from practicing physicians.

The most interesting aspect of the work centered around patients attending the clinics and admitted to the wards of Stanford University Hospitals. Approximately 1,500 specimens were obtained from patients with possible superficial mycotic infection. The most important phase of the work consisted of mycological examination of unselected materials in certain categories that were submitted to the diagnostic bacteriological laboratory for study. Each was examined by the appropriate methods described below. A total of 1,254 patients was included in this group. It was believed that the application of this screening technique on a wide scale would detect unsuspected fungus infections if they were present in the community in significant number.

METHODS

The following media were employed for the primary isolation of fungi from clinical materials.

From the Department of Medicine, Stanford University School of Medicine, San Francisco 15.

Supported by Grant No. E 786 from the National Institute of Allergy and Infectious Disease of the National Institutes of Health.

Submitted August 6, 1958.

TABLE 1.—*Species of Epidermophytes Grown on Cultures of Superficial Materials Obtained from 1,544 Patients*

Fungus	Number of Cases
Microsporum audouini	214
Microsporum canis	57
Microsporum gypseum	4
Trichophyton rubrum	103
Trichophyton mentagrophytes	60
Trichophyton tonsurans	90
Trichophyton violaceum	1
Epidermophyton floccosum	13
Total	542

1. Saboraud Dextrose Agar (Difco) with and without antibiotics. The antibiotics used from the beginning of the study through November of 1956 were penicillin 1.0 units per ml., chloramphenicol 5.0 mcg. per ml., and streptomycin 10.0 mcg. per ml. After that date, the antibiotics used were chloramphenicol, polymyxin and neomycin, each in a concentration of 20.0 mcg. per ml. The latter combination was much more effective in the inhibition of growth of bacteria and did not affect the pathogenic fungi significantly.

2. Brain heart infusion agar (Difco).

3. Thioglycolate medium without dextrose (Difco).

The media were contained in appropriate screw cap bottles and tubes.

Materials obtained from superficial lesions were inoculated to Saboraud agar with antibiotics in duplicate and incubated at 22° C. Untreated materials from other sources were heavily inoculated to Saboraud agar with and without antibiotics in duplicate and incubated at 22° and 37° C. An anaerobic brain heart infusion agar plate and thioglycolate broth at 37° C. were also included.

The antibiotic-containing media were remarkably effective in inhibiting the growth of bacteria and had no effect on any of the species of fungi except actinomycetes and Nocardia.

RESULTS

Superficial Mycoses

The study of superficial mycoses was conducted in cooperation with the Division of Dermatology from July 1, 1953, through December 1, 1955. 418 specimens of hair, 974 of skin and 152 of finger and toe nails were examined. Potentially pathogenic fungi were recovered from more than one-third of these specimens. The species of epidermophytes recovered are listed in Table 1.

The large number of infections by *Trichophyton tonsurans* was of special interest. A description of some of these cases has been published.[1]

TABLE 2.—*Sources of Clinical Materials Used in Search for Systemic Fungus Infections*

Source	Number of Patients	Number Negative	Number Positive*
Sputum	548	372	166
Bronchial lavage, etc.	111	95	12
Gastric lavage, etc.	31	16	15
Pleural fluid	30	29	1
Abscesses, pus, wound drainage, sinus tract, cellulitis, etc.	134	114	17
Spinal fluid	37	37	0
Joint fluid	24	24	0
Blood	6	5	1
Biopsy of nodules, autopsies, cysts, tissue, etc.	149	143	4
Eye	17	16	1
Vaginal exudate	97	59	37
Nasopharyngeal	142	74	66
Urine	54	41	13
Stool	49	31	18
Cultures for identification	20	9	10
Total	1,449	1,087	361

*Potentially pathogenic fungi.

TABLE 3.—*Fungi of Possible Significance Recovered from the Clinical Materials Listed in Table 2*

Organism	Number of Cases
Candida albicans	261
Candida krusei	12
Candida parakrusei	10
Candida stellatoidea	17
Candida Guiliermondi	3
Candida tropicalis	20
Candida pseudotropicalis	3
Total Candida	326
Cryptococcus neoformans	2
Coccidioides immitis	19
Actinomyces bovis	7
Blastomyces brasiliensis	1
Nocardia asteroides	5
Nocardia madurae	1
Total fungi other than Candida	35
Total all fungi	361

Deep Mycotic Infection

The search for systemic fungus infections by the screening procedure described above continued from July 1, 1953, to August 31, 1957. Materials obtained from 1,449 patients including 1,254 in the Stanford University Hospitals group were studied. The sources of materials and the number from which a fungus of possible significance was isolated are listed in Table 2. The various species of fungi recovered are listed in Table 3.

More than 90 per cent of the organisms isolated were various species of Candida. The clinical significance of the presence of these fungi was usually difficult to assess. In many instances, when infection was present it was superficial. Of greater interest was the identification of 19 cases of disease caused by *Coccidioides immitis,* seven by *Actinomyces bovis,* five by *Nocardia asteroides,* two by *Cryptococcus neoformans* and one each by *Blastomyces brasiliensis* and *Nocardia madurae.* A definite deep or systemic mycotic infection was present in 2.4 per cent of this whole group of patients.

Pulmonary Infection. Specimens of sputum and materials obtained by gastric and bronchial lavage were available from 690 patients. *Candida albicans* was isolated from 138 specimens and other species of this group of fungi from 44 specimens. It was difficult to determine whether these organisms which were often present in small numbers were the cause of disease. Twelve cases in which large numbers of Candida were repeatedly cultured from sputum were studied in some detail. In four of the patients, who were undergoing diagnostic study, no definite evidence of pulmonary disease was uncovered, two had lung abscess, one had far advanced cancer of the lung and one had extensive tuberculosis. Several of these patients had received antimicrobial therapy and it was evident that the presence of fungi was not related to the principal disease.

Large numbers of *Candida albicans* were recovered on several occasions from sputum specimens obtained from three elderly patients with senile emphysema and asthmatic bronchitis. All had had previous antimicrobial therapy, and they improved when such therapy was begun again in association with bronchodilator agents. In none of these cases could a diagnosis of fungus infection be established.

In the case of one debilitated, elderly man with disseminated carcinoma of the stomach, fever and rales in the chest developed. Large numbers of *Candida albicans* were present in the sputum, and no other significant organisms. The pulmonary infection resolved slowly after penicillin was administered, but it could have been pulmonary moniliasis.

The most interesting case was that of a 57-year-old man who had been well until two months before admission. At that time dyspnea began and became progressively more severe. The clinical impression was that of pulmonary fibrosis of unknown cause complicated by cor pulmonale. Laboratory study revealed eosinophilia of 20 per cent and a very high plasma content of gamma globulin. The presence of very large numbers of *Candida krusei* was noted in nine examinations of sputum, and the patient had exquisite hypersensitivity to the intradermal injection of a vaccine prepared from this organism. Treatment with an adrenal steroid and graded injections of the vaccine were associated with dramatic improvement for about three months. Then, in another community, all treatment was discontinued and the patient failed rapidly and died. No autopsy was done. It seemed possible that in this case the illness was owing to infection by, and hypersensitivity to, *Candida krusei* with associated pulmonary fibrosis.

Candida albicans was twice recovered as one of a mixture of organisms from pleural fluid obtained from a patient with postoperative empyema and bronchopleural fistula complicating lobectomy. Recovery followed appropriate drainage of the pleural cavity.

Coccidioides immitis was cultured from material from ten patients, seven of whom were in outlying hospitals. Three strains were isolated from materials obtained from patients in the Stanford University Hospitals clinics, an incidence of 0.5 per cent of this group of unselected cases.

Cryptococcus neoformans was recovered from specimens of sputum obtained from two patients, one of whom was in another hospital.

One case of pulmonary nocardiosis and one of actinomycosis were recognized, both by study of specimens of sputum received from other hospitals.

These data demonstrate that fungus disease of the lungs may be discovered in northern California but is excessively uncommon when infection by *Coccidioides immitis* is excluded. The distribution and occurrence of this disease in the San Joaquin Valley has been studied in detail[2] and the infections discovered during this study were probably acquired in that area. No actinomycosis and only one case of Cryptococcus infection were discovered in the Stanford University Hospitals group of patients.

Septic Infection. Materials obtained from 134 patients with various apparently septic infectious processes were studied and significant fungi were recovered from 17 (12.7 per cent), only two of whom were members of the group studied in the Stanford clinics. Six of the infections were caused by *Coccidioides immitis,* six by *Actinomyces bovis,* three by *Nocardia asteroides,* one by *Nocardia madurae* and one by *Candida sp.* The last came from material obtained twice by incision and drainage of an abscess at a pressure point on the buttock under a prosthetic device worn by an amputee. In both specimens the organism was present in very large numbers. The abscess healed after the second operation.

Body Fluids. Spinal fluid obtained from 37 patients with various forms of central nervous system disease, and fluid from the joints of 24 persons with arthritis were studied and no fungi of any kind were isolated. *Candida albicans* grew on one of seven blood cultures examined. The infected specimen was from a man who died of postoperative sepsis. He had received tetracycline orally for two weeks. *Staphylococcus aureus* also grew on the same blood culture.

Tissue. Specimens of tissues obtained at operation and necropsy from 149 persons in the Stanford clinic group were examined and *Coccidioides immitis* was obtained in three cases and *Candida krusei* in one. The latter case was one of acute leukemia in a child who died while under treatment with tetracycline for staphylococcic sepsis. At necropsy many small inflammatory nodules were observed in the lungs and spleen and large numbers of *Candida krusei* were isolated from the latter organ. Presumably the lesions were those of disseminated candidosis following treatment of a seriously ill patient with a broad spectrum antibiotic.

Eye. The organism *Nocardia asteroides* was isolated from material obtained from the tear duct of one patient.

Gastrointestinal Tract. Various species of Candida were recovered from 66 of 142 specimens obtained from nasopharyngeal swabs and from 18 of 49 specimens of stool examined. Many of these specimens that were positive for Candida were obtained from patients who had toxic gastrointestinal reactions to antimicrobial agents, particularly to the tetracycline. It was of interest to observe the absence of fungi in certain persons with these disorders and the inability to correlate their presence with the occurrence of symptoms in others receiving antibotics.

Genito-urinary Tract. Candida albicans was recovered from 36 and *Candida parakrusei* from one of 97 specimens of vaginal exudate that were examined. Many of the patients doubtless had vaginitis but detailed analysis of this group was not attempted.

Various species of Candida were found in the urine of 13 of 54 patients with urinary tract infection. The organisms were present in large numbers in six cases and these deserve comment. In five cases the patients had structural disease of the urinary tract; they had received antimicrobial therapy and had undergone catheterization or instrumentation of the urinary tract. The fungi did not seem to cause signs or symptoms of an unusual sort and were present in pure culture in only three cases. The sixth case was of greater interest. A six-week-old boy was treated with neomycin by mouth for diarrhea, caused by an enteropathogenic *E. coli*, that developed while he was in hospital for study of a congenital lesion of the heart associated with cardiac decompensation. Shortly thereafter he became febrile with pneumonitis and pyuria. Large numbers of *Candida albicans* were recovered from the urine. A urethral catheter had not been used. Death occurred within two weeks in another hospital and necropsy was not done. This was a case of probably disseminated Candidosis with pneumonitis and pyelonephritis following therapy with a broad spectrum antibiotic by mouth in a very sick baby.

Identification

Potential pathogens grew on ten of twenty cultures of fungi submitted purely for identification. Seven were various species of Candida, two were *Nocardia asteroides*, and one was *Coccidioides immitis.*

DISCUSSION

This study was designed to assess the frequency of infection and the importance of fungi as a cause of disease in northern California. The results indicate that superficial mycotic infections were a commonplace but systemic illness caused by these organisms was uncommon.

Approximately 2.5 per cent of the whole group of patients studied were infected by *Coccidioides immitis*, *Nocardia asteroides*, *Actinomyces bovis*, or *Cryptococcus neoformans.* A considerable number of the subjects studied were in other hospitals and were a selected group in whom fungus disease was known or suspected to be present.

Materials were obtained from the lungs and related structures, and from other organs and tissues of 1,254 patients in a group observed at Stanford University Hospitals and Clinics in San Francisco. Most of these examinations were made routinely without reference to whether the patient was thought to have a mycotic disease or not. Infection by these four kinds of fungus was proved in eight (0.6 per cent) of the patients in the whole group in which disease caused by these organisms was considered possible. The incidence would have been greater if the source of the materials had been more carefully screened. In several of the eight cases the clinical situation suggested mycotic disease. It is evident that the routine examination of a very large number of clinical specimens does not uncover many instances of unsuspected systemic fungus infection.

Candida in large numbers were recovered from the sputum, from material obtained on nasopharyngeal swabs and vaginal swabs and from stools of a considerable number of patients, many of whom had received antimicrobial therapy. It was nearly always difficult to assess the role of these fungi in the causation of various manifestations of the patient's illness. In no case was pulmonary Candidosis definitely diagnosed and in only three was there positive evidence of disseminated infection caused by these organisms. One case of localized abscess formation containing *Candida sp.* was observed.

Mycotic infection must always be considered in persons with possible infectious diseases, particularly of the lungs. The results of this study indicate that the search for this group of organisms in northern California will not often be rewarding except for the demonstration of coccidioidomycosis.

Candida of various species are often recovered from clinical materials but the role they play in the causation of disease is always difficult to ascertain. Serious infection by this group of organisms is most likely to occur in debilitated persons who have received antimicrobial therapy.

Stanford University Hospitals, Clay and Webster Streets, San Francisco 15 (Rantz).

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2. Smith, C. E.: Coccidioidomycosis. The Pediatrics Clinics of North America, Feb., 1955. Vol. 2, No. 1. W. B. Saunders and Co., pages 109-125.

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While I know you understand that I, as your personal physician, am not in complete control of all medical care costs, I still would like to emphasize a few facts:

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Electromyography

Uses and Limitations

ROBERT V. MILLER, JR., *M.D.*, Beverly Hills

• A normal muscle at rest emits no detectable electric current, but in action, in diseases of the muscle and in denervation it emits electric impulses characteristic of these states. The impulses can be amplified and studied through the sonic and oscilloscopic patterns they create. These patterns are sufficiently different so that simple atrophy of disuse can be distinguished from the denervation that may be associated with it. Since denervation can be localized to individual muscles and thence to the nerves controlling them, electromyography serves much the same function as myelography, with comparable accuracy and with greater safety and simplicity. It aids in the diagnosis of several muscular diseases of children and adults.

Because electromyographic changes due to injury do not appear until 18 to 21 days later, a study made soon after injury can either disclose or rule out preexisting lesions. Then a later study indicating denervation is objective evidence that any disability is due to the injury in question.

THE ELECTROMYOGRAPH is an electronic device that amplifies and converts the minute voltages picked up by a needle electrode inserted into a muscle, expressing these currents by loudspeaker or visually by a cathode-ray oscilloscope. By this means the electric potentials of normal, diseased or denervated muscle can be studied. Normal muscle has two significant electromyographic characteristics: It emits no detectable impulses at rest, and on insertion of the needle electrode the electrical activity caused by the mechanical stimulation of insertion is quickly dissipated.

Muscles whose nerve supply is injured or diseased have typical changes in electromyographic response, reflecting hyperirritability. Abnormalities are most likely to appear on insertion of the needle—sharp wave activity and fibrillation. The mechanically induced reaction may wane in a few seconds and activity may cease, or spontaneous fibrillation may continue. Polyphasic motor units may appear on contraction; but they are clinically important only when associated with sharp waves or fibrillation. In the early days of electromyography, undue importance was attached to polyphasic motor units in the anterior compartment of the leg, until it was learned that many normal persons give this response because of habitual pressure on the peroneal nerve due to crossing the legs or to lying in bed for long periods.

Myopathic conditions also give rise to characteristic findings,[2,4,5] classified electromyographically as dystrophic or myotonic. Dystrophic impulses are characteristically of low amplitude but rapid sequence and are under voluntary control. The myotonic states are distinguished by an intense high-frequency discharge on needle insertion, persisting for many seconds. The discharges may also be elicited by percussion on the muscle in the region of the needle, or by voluntary contraction of the muscle, but they cannot be voluntarily stopped. The auditory signal from this high-frequency discharge is best described by the term, "dive-bomber effect."

Artifacts that may interfere with electromyographic observation are numerous and the changes they cause may closely simulate those of recognized abnormalities. Although the experienced myographer learns to recognize many of these accidents, he also insists on clear-cut and reproducible findings which are manifestly clear of such accidents. Common causes of misleading findings are improper grounding of the patient and the machine; cardiac impulses and tremor discharges; disturbances caused by diathermy machines, radio waves or interference with house-current, loose contacts in the electromyographic circuit and defective insulation of the needle electrode.[3] The most misleading factor, and the most difficult to eliminate, is incomplete relaxation of the muscle being examined. Some patients have great difficulty in relaxing the muscles of the posterior neck and the back.

The electromyographer must not restrict his examination to a certain area merely because the referral mentions no other; he must be ready to investigate as far as his examination leads him. For this he must be able to place the electrode precisely, knowing exactly in which muscle belly he is inserting it, and he must further know the root supply of the muscle and its peripheral nerve if he is to localize lesions as precisely as electromyography permits. For this and other reasons, when the physician

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delegates electromyography to technicians or other less qualified persons he immeasurably reduces the validity of the examination.

Besides the polyphasic motor units previously described, so-called "fasciculation voltages" may occur in many disease states and occasionally in normal muscles. Similarly, myotonic impulses are not limited to the myotonic states; they have been observed in peripheral nerve injury, dermatomyositis, polymyositis, Marie-Charcot-Toothe disease, progressive spinal muscular atrophy and arthrogryposis.[2,3] Dystrophic motor units, too, have been reported in other conditions than muscular dystrophy —scleroderma, acrosclerosis and lupus erythematosus. These irregularities should be reported, therefore, as impulses or motor units of a myotonic or dystrophic type, with no attempt to draw a diagnostic inference, unless the pattern predominates in the electromyographic tracing. Conversely, the referring physician must not place too much importance on the finding of occasional patterns of the myotonic or dystrophic type.

An apparent error in localization occasionally occurs. The electromyographic findings may indicate clear-cut involvement of the first sacral nerve root but myelography show a defect at the fourth lumbar interspace. The reason of course is that a medially and inferiorly herniated nucleus pulposus at the fourth lumbar interspace may compress the first sacral nerve root intradurally rather than the fifth lumbar root which exist laterally at this level. Therefore, both the electromyographer and the neurosurgeon must keep in mind that electromyographic evidence of involvement of the first sacral root may be due to either a medially located lesion at the fourth lumbar interspace or a laterally located lesion at the lumbosacral interspace.[7]

In two reported series the accuracy in localization and detection of root compressions by herniated nucleus pulposus and tumor was not significantly different. In Bonner and Schmidt's series of 30 patients there was 80 per cent exact localization by electromyography as proven by subsequent operation.[1] In 24 of 30 patients, disease in the disc was found at the exact level detected by the electromyograph. In four of the remaining six cases, the report was not completely accurate although it was of definite clinical value; in two cases the lesion was not localized by this means.

In Shea, Woods and Werden's series of 75 cases there was 90.7 per cent accuracy of electromyographic diagnosis as confirmed by operation.[7] Myelography was done in 68 of these cases with accuracy of 85.3 per cent. Clinical experience has shown that when myelography and electromyography are both used in the same case the accuracy in establishing the existence of a root lesion and localizing it exactly is much better than when either method is used alone, since findings are seldom negative from both when root involvement exists.

The conclusions of Marinacci after evaluation of 157 cases of laminectomy, all studied by electromyogram and all but ten by myelogram, were as follows: "The electromyograph is of great value where the myelographic findings are normal or indefinite, especially so in the lumbosacral lesions. The myelogram is of a more localizing value than the electromyogram in L-3 lesions." In his experience when definite root compression existed the electromyogram was 80 to 90 per cent accurate in determining exact localization.[4]

USES AND ADVANTAGES

The uses and advantages of electromyography are many. In the first place it supplies objective findings which are not obtainable by any other means. There is direct observation of impulse from the muscle fiber itself without intermediary procedures which could add error. The test is extremely sensitive and is actually a microphysiologic examination of a minute area of muscle and its nerve supply. It is entirely objective. The patient cannot change, influence or alter the findings. There are no after-effects or complications. The cost is reasonable. The test may be performed in the office.

Electromyography is not designed to take the place of a neurological examination or roentgen or other laboratory procedures. The findings have no more nor less significance than other diagnostic data, although in certain circumstances this method affords valuable information which is otherwise not obtainable. In peripheral nerve injuries the ability to localize the lesion, to determine extent of involvement and to follow the progress of reinnervation is outstanding.

Electromyography is of great diagnostic value in differentiating atrophy due to disuse, denervation or primary muscular disease. In atrophy of disuse the electromyographic response is characteristically normal, but the disuse may be associated with nerve damage, and the two elements are difficult to separate clinically. The area atrophied by disuse may be proximal, adjacent or distal to the area of denervation,[6] but it does not respond to electromyography with the sharp wave activity and fibrillation characteristic of denervated muscle. The same difference in response may help to distinguish between atrophy due to denervation and that due to disuse as a result of malingering or hysteria. On the other hand, if a patient with a conversion reaction also has organic denervation, electromyographic study may clearly delineate the extent of each. Muscular diseases, too, can be distinguished in cases where disability may be erroneously attributed to injury or occupation.

True muscular atrophy such as in amyotrophic lateral sclerosis and progressive spinal muscular atrophy is characterized by denervation activity in the pleurisegmental pattern. Infectious neuronitis (Guillain-Barré syndrome) typically involves most severely the muscles supplied by the longest axons; hence the distal muscles are most strongly affected. Atrophy of muscle as a result of myopathy is a problem occasionally seen in adults but is more common in children. There is dystrophic activity in muscular dystrophy and myotonic activity in the myotonias. The clinical problem of differentiating between poliomyelitis and muscular dystrophy is resolved by the finding of either a dystrophic pattern or the pleurisegmental lower motor neuron abnormalities of poliomyelitis.

An important feature of traumatic electromyographic changes is that they do not appear until 18 to 21 days after injury. Therefore a study made immediately after injury cannot indicate the extent of injury; and if denervation is disclosed at that time, it must be due to a preexisting lesion. Conversely, if denervation is not detected immediately after injury but appears after 21 days, it is evidently due to the recent injury and not to a previous one—a distinction of great practical importance in questions of workmen's compensation and other liability for injury.

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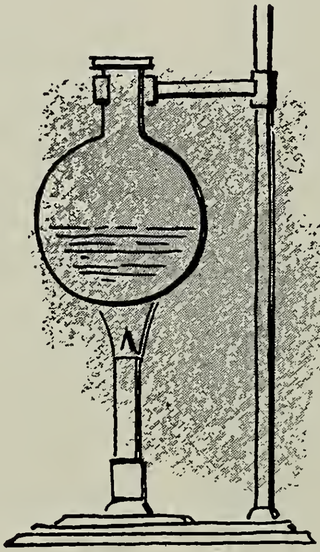

Problems in Ventilation in the Immediate Postoperative Period

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• In the present day practice of surgical anesthesia, drugs and techniques are used which require or lead to cessation of voluntary respiration by the patient. Respiration is then controlled by the anesthesiologist. At the termination of operation many patients do not breathe adequately for variable periods of time. The causes include obstruction, excessive sedation, muscle relaxants, the effect of controlled respiration itself and various miscellaneous factors. A diagnosis is made by taking into consideration the drugs and techniques which have been used and the character of the patient's respiratory efforts, if any. The cause may then be treated. In some cases antidotes are available. However, until truly adequate spontaneous respiration is observed for some time the patient must have his efforts assisted. High oxygen concentrations must not be substituted for adequate ventilation.

BALANCED ANESTHESIA achieved by the administration of intravenous barbiturates, opiates, muscle-relaxing drugs and nitrous oxide by inhalation, is the most commonly used method in California. The reasons for the prevalence of this method include pleasant induction, minimal postoperative nausea and vomiting, elimination of explosive agents and many patients' fear or dislike of regional anesthesia in general and of spinal anesthesia in particular. In order to produce satisfactory working conditions for surgical procedures in which such a combination of anesthetics is used, the dosages employed frequently lead to respiratory depression of either central or myoneural origin. The agents used intravenously are not excreted by the lungs but continue their depressant activity until eliminated by the slower processes of excretion or destruction. Prolonged respiratory depression or paralysis, which rarely occurred before balanced anesthesia came into wide use, are now the major causes of postoperative respiratory inadequacy.

The causes of inadequate ventilation in the postoperative period can be grouped into five categories: (1) Obstruction to the airway; (2) drug depression of the respiratory center; (3) prolonged effect of muscle-relaxing drugs; (4) "habit apnea," occurring after long periods of controlled respiration; (5) miscellaneous causes such as pulmonary atelectasis, pneumothorax, tight dressings and pain on respiration. Several of these factors may co-exist in the same patient.

Obstruction of the airway anywhere between the nostrils or mouth and the pulmonary alveoli has been the most common cause of hypoxia since the advent of general anesthesia. Maintenance of a patent airway is the first principle of anesthesia taught to all medical students. Nevertheless, patients are still placed in jeopardy by such respiratory obstruction as laryngeal edema, tracheal compression occurring after operations on the neck and even the commonplace blocking of the pharynx by the tongue.

Depression of the respiratory center by drugs is often seen in the postoperative period after balanced anesthesia has been used. The slow rate of elimination of the intravenously administered drugs has been mentioned as a cause. Moreover, the degree of depression of the respiratory center during and after an operation, depends on the balance struck between the depressant effect of drugs on the one hand and the stimulation of pain on the other. Patients who have the severe pain of coronary thrombosis or ureteral colic tolerate large doses of opiates and still continue to breathe adequately. Cessation of the pain may bring on a pronounced slowing of the respiratory rate. A comparable phenomenon may be seen at the end of a painful surgical procedure: A patient who was breathing well during the operation drifts into slower and shallower breathing on termination of the stimulus of pain. This is particularly evident when the main anesthetic agent is a barbiturate. The analgesic properties of barbiturates are so poor that large amounts are necessary to obtain even moderate relief of pain. If repeated doses are used, a reservoir of the drug accumulates in the fatty tissues, with the result that during the postoperative period the respiratory depression is even greater than it was during the operation.[1]

The muscle relaxants are probably the most frequent cause of apnea or inadequate respiration occurring after the last skin suture has been tied. Surgeons have become so accustomed to complete

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muscular relaxation of the patient while they operate that paralysis of all voluntary muscles, including the intercostals and diaphragm, is common during abdominal operations. Moreover, the greatest degree of relaxation is requested at the time of the wound closure. Partial or complete paralysis of the muscles of respiration in the postoperative period may be due to long-acting relaxants used near the end of the operation, to the total cumulative effect of excessive dosage or, in instances, to unexpectedly prolonged drug action. Much investigation has been done and many theories proposed to explain this last, fortunately small, group.[3,5]

"Habit apnea" is the term used to describe apnea occurring after a period of controlled respiration. The incidence of this respiratory difficulty has increased with the increased use of balanced anesthesia. It may last 15 minutes or more. Depression of the respiratory center by inhibiting stimuli from repeatedly distended pulmonary alveoli (Hering-Breur reflex) is the main cause of such apnea, although narcotic depression or the low carbon dioxide tension of hyperventilation may also be a contributing factor.[2]

For the purpose of discussing diagnosis and treatment, all cases of inadequate ventilation are divided first into those in which apnea occurs and those in which it does not. The latter category includes all patients whose spontaneous respiration is not capable of satisfying the need for oxygen and eliminating carbon dioxide. Clinically, absence of cyanosis is evidence of sufficient arterial oxygen if the patient is not anemic. Usually it is safe to assume that if the patient is not cyanotic while breathing room air, no serious accumulation of carbon dioxide will occur. If the patient's respiratory efforts do not fulfill these requirements, one must determine why and in what manner they are deficient. Examination of the chest and careful observation of the respiratory movements will provide the answer. Signs of obstruction of the air passages, such as noisy respiration and retraction of the soft tissues of the chest wall during inspiration, must be looked for and the obstruction relieved if present. Movements and breath sounds of the two sides of the chest are compared and the position of the trachea in the lower neck is noted to rule out the possibility of pulmonary atelectasis or pneumothorax. The former is treated by thorough suctioning of trachea and bronchi to aspirate mucus and stimulate coughing. The suctioning of plugs of mucus may require direct vision through a bronchoscope. That complete reexpansion of the lung has taken place should be confirmed by a roentgenogram of the chest at the earliest opportunity. Moderate pneumothorax without serious respiratory embarrassment requires no active treatment, although the condition should be kept under observation until all the air in the pleural space is reabsorbed and the lung fully expanded. Severe respiratory embarrassment caused by pneumothorax indicates that increased pressure exists in the pleural cavity. Such a tension pneumothorax is an emergency requiring immediate release of the pressure by a needle introduced through the chest wall. If the tension pneumothorax recurs, pleural drainage by catheter to a water-seal or the use of continuous suction may be necessary.

The respiratory movements are also studied for signs of the typical gasp-like breathing, tracheal tug and lack of intercostal muscle activity which are seen in patients still partially paralyzed by muscle-relaxing drugs. If such signs are found and the drug used has been a short-acting depolarizing agent such as succinylcholine, a period of assisted respiration is all that is usually necessary. If curare is the cause of impaired breathing, neostigmine with atropine or edrophonium (Tensilon) may be used to return the respiration to normal. A second dose of these antidotes may be necessary to prevent the signs of paralysis from returning as the action of the first dose wears off.

If respiratory movements are smooth, symmetrical and unobstructed, the rate and depth are ascertained to make sure that pulmonary exchange is adequate. Since ventilation of the alveoli is the essential purpose of external respiration, increased depth can compensate for a diminished rate, although an increased rate is not nearly so efficient in compensating for shallow respiration. Shallow respiration may do little more than ventilate the dead space and leave the alveolar air almost unchanged. Diminution of either rate or depth when respiration is smooth is a sign of considerable central depression. A slow rate is more typical of depression by narcotic agents, while almost all other central nervous system depressants predominantly reduce the depth. We now have reliable antagonists to narcotic depression of respiration in N-allylnormorphine and levallorphan but in the absence of narcotics these agents can themselves act as respiratory depressants.[4] At present the only reliable antagonists of the non-narcotic depressants are time, the stimulating effect of postoperative pain and the return to consciousness.

Not only can several of the causes of inadequate postoperative ventilation be present in the same patient but some of these causes can predispose the patient to others. Thus a partially paralyzed, depressed patient is more likely to have an obstructed airway or to develop atelectasis.

A further problem is presented by apnea that continues into the post-operative period. Although complete control of respiration is rarely a necessity when balanced anesthesia is used, assistance of respiration is often advisable. When respiration is assisted, many patients cease making spontaneous efforts and passively allow themselves to be ventilated. The end of the operation finds these patients no less apneic than they would be from apnea deliberately brought about as a necessary part of the operative procedure.

In managing postoperative apnea one must first determine the cause. The amounts of the various agents used during the procedure, and the time of administration, are reviewed, as well as how the patient responded to each drug when it was administered. An observation of exceptional sensitivity to any of the drugs used may help incriminate it as the cause of apnea.

The first step toward making a diagnosis is the elimination or "washing out" of inhalation agent. This may so reduce the level of analgesia that painful stimuli stir the respiratory center into activity. Having done this, one must make certain that he is not faced with mere "breath holding." The presence of an endotracheal tube or an oro-pharyngeal airway may be the stimulus for breath holding. The "breath holder" resists efforts made to expand his lungs fully and also demonstrates generalized increased muscle tone. Such patients soon resume spontaneous respiration.

If the postoperative apnea is not the result of breath holding and if the patient has been subjected to controlled respiration during a long operation, habit apnea can be suspected. This suspicion is strengthened if the dosage of the drugs used was relatively small. Continued rhythmic controlled respiration tends to prolong the apnea. Oxygenation of the patient should be maintained by irregular compression of the rebreathing bag. If oxygen is used for this purpose, some accumulation of carbon dioxide is permissible but only to the point of allowing a slight increase in the pulse rate. When spontaneous respiration reestablishes itself, the cause of the apnea is confirmed if the patient progresses from small gasps at a slow rate to a full depth and rate in a matter of minutes.

There now remain for discussion those patients with apnea that is either the result of excessive sedation or paralysis by the muscle-relaxing drugs. When sedation is at fault, which is suggested if an excessive amount of sedative agents have been used during the operation, treatment can begin by counteracting the effect of the narcotics used. Both N-allynormorphine and levallorphan are effective in antagonizing the respiratory depression of narcotics. If barbiturates are the cause of the lack of spontaneous respiration, there are as yet no reliable proved antidotes although much work is reported in this field and several promising agents have been tried.[7] A central nervous system stimulant such as caffein sodium benzoate, although not specific, may be used with some success. Brief duration of action is the main disadvantage. By themselves the doses of the barbiturates used in the operating room seldom produce apnea of long duration, but the ensuing inadequate ventilation may require supportive treatment for many hours.

Total paralysis caused by the muscle relaxants such as curare and succinylcholine should be suspected as the cause of apnea if large doses of these drugs were necessary during the operation. This occurs most frequently during long operations in the upper abdomen. Artificial respiration is continued until some spontaneous efforts are observed, at which time antidotes may be administered. Edrophonium and neostigmine with atropine are useful in counteracting the paralysis of the curare group of relaxants but they may accentuate the paralysis of the depolarizing agents such as succinylcholine. Second and third doses of the antidotes at half hour intervals may be necessary to maintain their effectiveness. Although there are no antidotes for succinylcholine and related relaxants of the depolarizing group, the period of action of these drugs is briefer after the first spontaneous movements are observed. Some cases of apnea following intraperitoneal administration of neomycin have been reported, but they responded to neostigmine treatment.[6]

Anyone who uses muscle relaxants often enough will sooner or later encounter the complications of postoperative apnea or partial respiratory paralysis of many hours' duration, despite the use of antidotes. The patients in such cases may have a potassium deficiency and there are now reports of successful treatment of this condition with intravenous potassium.[5] The treatment is administered by slow infusion of a 0.3 per cent solution of potassium chloride in 5 per cent dextrose in water or in one-half normal saline solution, the rate of infusion being controlled by monitoring the electrocardiographic tracings for signs of potassium toxicity. Perhaps this treatment will prove to be consistently effective in those cases of apnea that do not respond to the usual care.

In all instances of prolonged apnea, proper ventilation is the main consideration. Hypoxia, hypercapnia and hypocapnia can each depress the respiratory center and thus prolong the apnea, although each by different mechanisms of action.[8] Controlled respiration that will provide adequate oxygen supply without seriously altering the carbon dioxide level is essential. If carbon dioxide analyzers were part of every anesthetic machine, one could routinely monitor the carbon dioxide tension of the expired air. For practical purposes, if air instead of oxygen is used to ventilate an apneic patient's lungs and the minute volume is just great enough to prevent cyanosis, the carbon dioxide level will not veer too far from normal. This can be done with a Kreiselman resuscitator or with an anesthetic machine that has a source of compressed air.

There is usually more than one cause of postoperative respiratory inadequacy. Treatment consists first of establishing patent air passages and providing adequate ventilation. Although stimulants and antidotes may be available, they supplement rather than replace controlled or assisted ventilation of the lungs. A patient who can just maintain oxygen requirements while breathing a mixture with a high oxygen content cannot be left on his own. Such breathing is not sufficient to eliminate carbon dioxide and may also permit hypoxia if the patient should slump back into a more deeply sedated state. The danger point may be considered passed when the patient is able to satisfy his oxygen requirements for more than five minutes while breathing room air unassisted. A patient at that stage, although still showing some signs of depression or paralysis, can be sent safely to a recovery room to have oxygen administered by catheter, mask or tent.

Problems in ventilation in the immediate postoperative period occur very frequently. Prompt recognition, diagnosis and treatment are essential for the prevention of serious or permanent complications.

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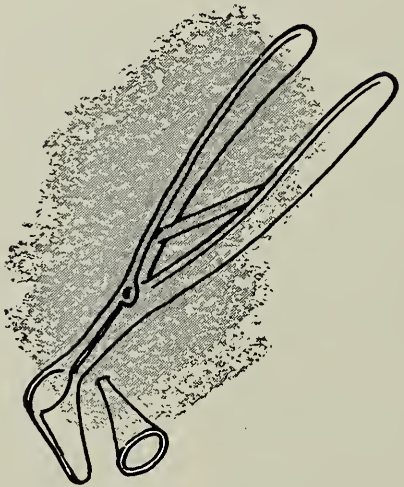

Plasmanate®

A New Plasma Substitute for Pediatric Therapy

**THOMAS C. COCK, *M.D.*, CHARLES M. BINGER, *M.D.*,
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• **Plasmanate®, a human-serum protein solution, appears to have all the attributes of an ideal plasma expander. Freedom from infection, immediate availability in a clear, stable solution and the apparent absence of antigenic properties are particularly valuable qualities. The efficacy and safety of Plasmanate was clinically demonstrated in the treatment of 125 infants and children. This solution seems especially effective in the treatment of acute shock states and for the physiologic correction of hypoproteinemia. Comparison with other plasma expanders makes Plasmanate the agent of choice in the initial treatment of shock states in pediatrics.**

THIS REPORT describes a two-year experience in which 125 infants and children have received intravenous infusions of a fractionated, human-serum, protein solution, Plasmanate.®* This solution has the attributes of an ideal plasma substitute: (1) Immediate availability in a clear, free-flowing, stable solution, (2) freedom from infectious agents, pyrogens, toxins, and antigens, (3) a virtually potassium-free, electrolytically hypotonic solution, (4) oncotic activity equivalent to plasma, and (5) physiologic protein material.

Fundamental objectives of this study were the development of clinical indications and the evaluation of efficacy and safety of this unique solution.

PROPERTIES OF PLASMANATE

The proteins of Plasmanate (albumin, alpha-globulin, and beta-globulin) are obtained as by-products during the Cohn fractionation of human serum in the process of recovering gamma-globulin and fibrinogen. When reconstituted as a 5 per cent solution in a diluent of 0.75 per cent saline at a pH of 6.75 to 7.25, the proteins show an electrophoretic composition of 88 per cent albumin, 7 per cent alpha-globulin, and 5 per cent beta-globulin (Table 1). The oncotic activity is comparable to that of plasma. The solution is virtually potassium-free and is hypotonic electrolytically. All the essential amino acids are present in the protein fraction. The possibility of transmitting the virus of homologous serum hepatitis has been eliminated by heating at 60° C. for 11¼ hours. (Gellis[4] in 1948 and Murray[7] in 1953 demonstrated that this virus is completely destroyed by heating at 60° C. for ten hours.) The proteins of Plasmanate are heat-stable and show no evidence of alteration by the heat treatment.[6] Plasmanate is a crystal-clear, amber solution that appears to be infinitely stable at shelf temperature.

CLINICAL STUDIES

Two groups of children were studied clinically. In one were 94 acutely ill infants and children in extreme shock states associated with the dehydration of diarrhea, toxemia and infections, and with extensive burns. In the other were 26 chronically ill children who had pronounced serum protein deficiencies due to such causes as idiopathic hypoproteinemia, malnutrition and burns. All children were observed for any reactions, complications or problems that might be associated with the infusion of human-serum proteins.

Plasmanate was used in the following dosage schedule:

In acute shock states (as plasma expander): 30 cc. per kilogram (15 cc. per pound) of body weight, infused intravenously at up to 5 to 10 cc. per minute.

TABLE 1.—*Electrophoretically Determined Content of Human Serum Protein Solution, Plasmanate®*

1. 88 per cent albumin, 7 per cent alpha globulin and 5 per cent beta globulin, including all essential amino acids.
2. Electrolytes per liter:

Sodium	111 mEq.
Calcium	1.6 mEq.
Magnesium	0.8 mEq.
Potassium	0.5 mEq.
Silicon	0.2 mEq.
Chloride	61 mEq.
Caprylate	4 mEq.
Acetyl-tryptophane	4 mEq.
Proteinate	36 mEq.
Acetate	6 mEq.

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Children's Hospital of the East Bay, Oakland 9.

*Supplied by Cutter Laboratories, Berkeley.

In chronic hypoproteinemia: 20 to 30 cc. per kilogram (10 to 15 cc. per pound) of body weight, infused daily, as required, by slow intravenous drip.

Among the patients in acute shock states there was rapid response as indicated by improved color, response to stimuli, improved orientation and restoration of normotensive blood pressure in 95 per cent (Table 2). Four infants who were considered to have a hopeless prognosis on admission responded to therapy with clinical improvement but died later of causes related to the primary illness.

TABLE 2.—*Response to Plasmanate in 94 Children in Acute Shock States*

Clinical Entity	Total Cases	Immediate Clinical Response	Sustained Clinical Response	Adverse Reaction
Gastroenteritis and dehydration	66	64	63	0
Peritonitis	3	3	3	0
Meningitis	3	2	2	0
Pneumonitis	3	3	3	0
Hemolytic disease of newborn	1	1	0	0
Blood loss at operation	4	4	0	0
Thermal burns	4	4	1	0
Acute poisoning	1	1	0	0
Hyaline membrane	1	1	0	0
Blood dyscrasias	2	2	0	0
Sicklemic crisis	6	4	2	0
Totals	94	89	74	0

TABLE 3.—*Response to Plasmanate in 26 Children in Hypoproteinemic States*

Clinical Entity	Total Cases	Clinical Improvement	Serum Protein Increase
Subdural hematomata	3	3	1
Thermal burns	4	2	1
Cachexia (malnutrition)	2	2	2
Postsurgical	8	6	1
Chronic gastroenteritis	6	6	3
Nephrosis	1	1	1
Idiopathic	2	2	2
Totals	26	22	11

Among the 26 children with persistent hypoproteinemia associated with thermal burns, subdural hematoma, malnutrition and chronic diarrhea, 22 responded to Plasmanate therapy with return of strength, gain in weight and satisfactory healing of surgical incisions and skin grafts (Table 3). Eleven had a significant increase in serum-protein content following repeated administration of Plasmanate.

More than 300 units of the solution were given to 125 infants and children in a period of two years. In no instance was there any evidence of sensitization, reaction or hepatitis, although 29 patients received repeated infusions at varying intervals (Table 4). Thirty-seven patients subsequently received whole-blood transfusions, and in no instance was there interference with type and cross-match procedure or with the transfusion.

DISCUSSION

One of the most urgent therapeutic emergencies encountered in pediatrics is the treatment of shock associated with the acute dehydration of diarrhea, toxemia or infection. An immediate need is to expand the circulating blood volume safely by the rapid infusion of a suitable plasma expander. All the agents that have been offered thus far as plasma expanders have serious deficiencies:

Plasma: The transmission of viral homologous-serum hepatitis has limited the use of this agent to only the most critical cases. Davidson[3] reported the incidence of hepatitis resulting from the use of pooled plasma to be 11.9 per cent. Shelf-stored plasma contains an opalescent gel with fibrin-like clots, which limits its immediate value as an intravenous preparation.[1] The content of sodium (156 mEq. per liter) and of potassium (5.2 mEq. per liter) is higher than desirable and would be dangerous to infuse into a dehydrated patient. The difficulty of quickly putting the lyphilized product into a solution limits its usefulness.

Serum albumin: This fraction has dehydrating properties that contraindicate its use in dehydrated infants. The rapid expansion of blood volume may

TABLE 4.—*Observation for Ill Effects of Plasmanate Infusion in 125 Children*

Number of Patients Receiving	Total	1 Month Between Administrations	1 to 6 Months Between Administrations	6 to 18 Months Between Administrations	Immediate Untoward Effects†	Subsequent Untoward Effects‡
1 unit* or less	96	....	....	....	0	0
2 to 4 units	19	16	2	1	0	0
5 to 10 units	3	1	1	1	0	0
More than 10 units	7	5	2	....	0	0
Totals	125	22	5	2	0	0

*1 unit contains 250 cc. Plasmanate.

†Observation for: Hyperpyrexia, hypotension, albuminuria, urticaria.

‡Observation for: Tissue damage, hepatitis, or interference with typing and cross-matching and transfusion procedures (37 of 125 patients were subsequently typed and cross-matched without interference or incident).

be accomplished at the expense of the fluid in an already depleted extravascular compartment. The development of hypervolemia with congestive heart failure or pulmonary edema following rapid infusion of serum albumin is a real hazard.

Amino acid solutions: Casein hydrolysates and other costly amino acid solutions are available. They are primarily designed to provide protein to the patient in negative nitrogen balance. Their value in shock is minimal, and they are contraindicated if anuria or azotemia is present.

Whole blood: In emergency situations, use of whole blood is limited by the time required for accurate typing and cross-matching, and by the immediate danger in transfusing it into a hemoconcentrated vascular bed. Fatal reactions occur in approximately 1 of 3000 transfusions[3] and hepatitis in 1 of 350 transfusions.[3] The long-range hazards of sensitization and immunization are infinite.

Bovine gelatin preparations: These are reported to interfere with typing and cross-matching procedures.[9] Most of them do not remain gels at body temperature. They stay in the circulatory system for a limited time, and it is estimated that approximately 60 per cent is lost through the kidneys in 24 hours. Hartmann[5] showed that gelatin, like other foreign substances, provokes formation of foam cells and foreign-body giant cells in the reticuloendothelial system.

Dextran® (6 per cent polysaccharide solution): Allergic reactions have been reported, and a Schwartzman-like reaction has been produced by repeated injection of Dextran into laboratory animals.[10] Recently Langdell[8] reported the appearance of a hemostatic defect characterized by prolonged bleeding time in 42 per cent of normal subjects who had been infused with Dextran.

Polyvinylpyrrolidone (PVP): This agent may produce cytotoxic changes in the nature of foam cells. Another disadvantage is the rapidity with which it is excreted from the body.[9]

Polyionic solutions: Commercial polyionic solutions containing potassium and varying quantities of electrolytes are dangerous when blindly infused in the face of poor renal function and abnormal serum content.

Plasmanate: The fractionated, human-serum, protein solution herein reported appears to answer many of the problems. Plasmanate provides most of the desirable attributes of plasma with none of the undesirable features. The oncotic activity, physiological pH, the hypotonic electrolyte content, and the presence of proteins that contain all the essential amino acids make Plasmanate a particularly attractive solution for initial intravenous therapy for an infant who is depleted by diarrheal disease. Infant diarrhea usually involves hemoconcentration (diminished blood volume), serum sodium deficiency, and surplus of serum chloride (hypochloremic acidosis) and potassium. Under such conditions, there is usually oliguria or anuria.

In the past, so-called physiological saline solution was often forced as the initial solution to combat shock and restore blood volume. In normal saline solution the chloride content is 155 mEq. per liter, whereas in the normal serum, chloride is only 103 mEq. per liter. The rapid injection of physiologic saline solution may add a proportionately large load of chloride to an already high serum level and already overburdened kidneys. Recently, Cheek[2] demonstrated that when high initial loads of sodium chloride were used, there was a prolongation of acidosis beyond 24 hours. Administration of low initial sodium chloride loads was associated with a more consistent reduction of acidosis at 24 hours and with return to normal serum chemical values at 72 hours. It seems logical to assume that Plasmanate, which has relatively more sodium (111 mEq. per liter) than chloride (61 mEq. per liter), osmotic pressure parallel to that of plasma, acidity within physiologic limits and negligible potassium content, would constitute an almost ideal solution for initial therapy in infants with acidosis, dehydration, and electrolyte depletion. The authors' experience indicates that this is the case.

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Importance of Caloric Intake During Renal Failure

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• Loss of excretory function in acute renal failure results in the retention of catabolites and fluid. In the absence of available carbohydrate, endogenous fat and protein become the main caloric sources. This results in the rapid accumulation of keto acids and nitrogenous wastes. By providing readily available non-nitrogenous calories, protein catabolism is reduced, complete oxidation of fat is obtained and energy is provided to drive potassium into the intracellular compartment.

The patient should be encouraged to eat despite his apathy, fear of vomiting and characteristically paranoid mood. Tube or parenteral feeding is complicated by the need to restrict fluid. Numerous small feedings are more successful than large meals. Hard candy and alcohol are often acceptable sources of calories, fat emulsions seldom. Oral hygiene aids feeding, and tranquilizers and anticholinergics are useful.

If the patient does not take food by mouth, tube feeding may be carried out. Because of the bleeding tendency so often occurring in uremia, tube feeding may be contraindicated if it causes erosion of the pharynx or esophagus. Intravenous infusion of invert sugar, glucose and alcohol may be necessary if nutrition cannot be accomplished by other means.

In ACUTE RENAL FAILURE the end-products of protein metabolism are retained— creatinine, uric acid, phosphorus and sulfates among them. These cause metabolic acidosis and contribute to uremic sequelae in the lungs, gastrointestinal tract and pericardium, as well as in the vascular and nervous systems. When fat and carbohydrate intake is inadequate, protein becomes the main source of calories, and protein metabolic wastes accumulate rapidly. It has been estimated that 20 to 30 grams of protein intake is sufficient to maintain nitrogen balance;[4] any additional protein is used for energy and further wastes accumulate. Moreover, stress, infection, fever or other hypermetabolic states mobilize body protein in more than normal amounts, and the increased wastage from this cause is compounded by the resulting mobilization of potassium, a further toxic load. Some replacement of essential amino acids metabolized by stress and by tissue repair may be necessary, but as yet this requirement has not been assessed.

By providing readily available fat or carbohydrate, protein is spared as a caloric source and the accumulation of retained protein waste is retarded. Energy is provided to drive potassium into the cells and the danger of hyperkalemia is diminished. During renal failure fat is not completely oxidized; keto acids and acetate accumulate, and the keto acids contribute to metabolic acidosis. (Normally, these substances enter the carbohydrate cycle and are converted into carbon dioxide and water.) Recent studies[2] indicate that stored body fat constitutes a considerable part of the caloric supply. If accumulation of keto acids is to be reduced, adequate carbohydrate must be provided for the complete oxidation of fat, for depression of protein oxidation with its release of indisposable wastes, and for the return of potassium to the cells.

The feeding of carbohydrates to a patient in renal failure may present a serious problem. As a first consideration, it must be remembered that the end-products of carbohydrate metabolism are carbon dioxide and water. The water, then, will contribute to overhydration; hence it must be considered in the daily computation of fluid replacement. Second, there is the clinical problem of encouraging carbohydrate intake in a patient tending toward nausea, vomiting, apathy, and—another frequent feature of uremic intoxication—paranoid reaction. There is a basic disinclination to eat, and fasting presents as many difficulties as protein feeding, since in both conditions body protein becomes the main caloric source. The necessity to limit fluid further complicates administration of calories.

METHODS OF TREATMENT

During the early phase of renal shutdown, caloric requirements can often be met by diet alone. The patient must be informed of the importance of adequate intake, and every effort should be made to encourage the waning appetite. Since fear of vomiting becomes an obsession with many patients, it should be explained that after initial emesis, additional food taken may be retained.

Dietary planning should include: Intake of 2,000 to 2,400 calories daily; limitation of protein to less than 50 gm. daily; sodium limitation to 500 mg. daily (unless abnormal losses occur); severe limitation of potassium-containing foods.

Five or six small feedings are generally better tolerated than three large meals. An estimate of the

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actual intake should be made at the time of each meal, so that compensatory calories may be administered parenterally.

Caloric supplements to the diet should be tried. Many patients can retain additional carbohydrate in the form of hard candy or plain sugar. Starvation ketosis can be controlled by giving 100 gm. of carbohydrate which should be considered the minimum daily replacement. Ingestible fat emulsions provide four to five calories per milliliter and are satisfactory for some patients, but in many they cause nausea, vomiting, and diarrhea. Alcoholic beverages used in moderation boost the caloric intake and provide a mild sense of well-being. The Borst regimen[6] of flour soup and butter balls may be tried, but it is unpalatable and generally refused by patients.

Oral dryness and encrustation make feeding difficult. Careful attention to care of the mouth helps to obviate these problems.

As retention products accumulate, anorexia increases. Chlorpromazine given 30 to 60 minutes before meals helps to overcome nausea. Urecholine, 5 to 10 mg. every six hours, or prostigmine (1:4000), 1 ml. at six-hour intervals, often improves peristalsis.

With progression of uremia, oral feeding becomes extremely difficult, but as long as peristalsis continues, fluid and caloric requirements may be supplied through a small plastic nasogastric tube. In most hospitals, the diet can be blended, strained and diluted to provide a tube feeding suitable for slow continuous drip administration. Blended foods seem to be tolerated better than fat or carbohydrate concentrates. A satisfactory pump has been devised[1] to force thicker fluids through plastic tubes at a slow continuous rate. This adjunct may help to increase caloric intake. Repeated observation for erosion in the nasopharynx is necessary, as severe bleeding may ensue. The bleeding diathesis that often occurs in uremia contraindicates the use of a nasogastric tube. Tube feeding should be discontinued if the abdomen becomes silent.

Further progression into the uremic state produces intestinal atonia and complete revulsion toward alimentary intake. At this point, it is necessary to resort to continuous parenteral nutrition. A cannula placed in the superior vena cava (via external jugular or cephalic vein), or in the inferior vena cava (via superficial external pudendal or saphenous vein) can be used for both hypertonic parenteral fluid administration and dialysis. Such a cannula should remain effective for two to three weeks with proper care. Heparin sodium, 50 mg. added to each liter of fluid, usually maintains the patency of the cannula. If the cannula is inserted through a stab wound, better wound healing can be obtained and infection is diminished. This procedure allows the initial incision to heal per primum.[3]

The fluids of choice are 40 per cent invert sugar and 50 per cent glucose. Regular insulin, one unit for each 5 gm. of sugar, should be added to each infusion. One hundred milliliters of 95 per cent ethyl alcohol, used as a supplement, provides about 400 calories. When diluted in one liter of fluid, this provides a sense of well-being without danger of intoxication. As yet, fat emulsions satisfactory for intravenous administration are not readily available. The ideal solution would be a combined fat and carbohydrate mixture of stable composition, free of pyrogenic ingredients.

To insure slow even infusion over any 24-hour period, infusion bottles should be marked at hourly-level intervals and the consumption checked frequently by attendants.

Severe vitamin depletion is a concomitant of the uremic state. Vitamin replacement carried out as nutrients are being given enhances utilization of caloric intake.

No single method of treatment is ideal. Each patient must be critically observed through each stage in the progression of the uremic process. Each mode of therapy must be analyzed and must be discarded when it no longer serves the intended purpose. The wide range of patient response necessitates a varied armamentarium.

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Effectiveness of Antacids in Reducing Digestive Disturbances In Patients Treated with Prednisone and Prednisolone

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• To appraise the efficiency of complemental antacid administration in preventing and reducing digestive disturbances during prolonged treatment with prednisone and prednisolone, 100 patients with active rheumatoid arthritis who were maintained on combined antacid and prednisone or prednisolone therapy for periods of one year or longer, were studied clinically and roentgenographically. Antacid therapy consisted of 300 mg. of dried aluminum hydroxide gel and 50 mg. of magnesium trisilicate taken with each 2.5 mg. dose of the steroids.

Digestive symptoms, such as indigestion, heartburn, sour eructations, gnawing epigastric distress and the like, were experienced by 18 per cent of patients during treatment with prednisone or prednisolone combined with antacids. Among patients who had been maintained on the steroids without antacids beforehand, the incidence of digestive complaints was reduced from 38 per cent to 17 per cent by the addition of alkali therapy, and the severity of the distress decreased in others.

Active peptic ulcers were detected roentgenographically in three of the 100 patients. In two instances the ulcers were asymptomatic and in two instances they were considered as reactivations of previously healed lesions. The incidence of active ulcers in this series was substantially lower than that reported by several investigators among patients treated with prednisone and prednisolone without the concomitant administration of alkalis. The size of dosage and individual susceptibility appeared to be important factors in the development of digestive disturbances from steroids.

Results of the study indicated that the complemental use of antacids with each divided dose of steroid is highly effective in reducing the frequency and severity of digestive symptoms during prednisone and prednisolone administration. The low incidence (3 per cent) for roentgenographically demonstrable active lesions in the series suggests that the addition of acid-neutralizing agents during prolonged treatment with these steroids may afford at least partial protection against the development and reactivation of peptic ulcers.

THE DEVELOPMENT of digestive complaints and the production, aggravation and reactivation of peptic ulcers are well-known complications of adrenal corticosteroid therapy. Shortly after prednisone and prednisolone were introduced clinically, attention was drawn to their potential ulcerogenic properties.[7] Subsequent experience has led many, though not all, investigators to the conclusion that these synthetic analogs promote gastroduodenal disturbances more frequently than do the naturally occurring hormones, hydrocortisone and cortisone.

There is a disparity in the reported incidence of digestive complaints and of peptic ulcers demonstrated roentgenographically among rheumatoid patients who have received prednisone and prednisolone for long periods. Bunim and co-workers[2] found that six of 39 patients treated for periods up to two years developed peptic ulcers, an incidence of 16 per cent. Later, when their series was enlarged to 59 patients, ulcers were detected in 15 patients (duodenal in nine, gastric in five, duodenal and gastric in one), an incidence of 25 per cent.[8] An even higher occurrence rate was noted by Kammerer, Freiberger and Rivelis;[10] of 88 patients maintained on prednisone, 31 developed peptic ulcers (35 per cent) during the course of administration.

In a group of 156 rheumatoid patients treated by Stolzer and collaborators[16] with prednisone or prednisolone, 48 per cent experienced symptoms of gastric irritation; the distress occurred twice as frequently as it did with agents the patients had received previously (cortisone, hydrocortisone, salicylates, phenylbutazone or gold salts). Gastroduodenal x-ray studies were done in 43 patients with severe or persistent dyspepsia, but not in all patients of the series; in seven patients peptic ulcers were demonstrated (duodenal in four, gastric in three) and in three others the findings were interpreted as hypertrophic gastritis. Neustadt[13] observed that 30 per cent of 47 patients treated for more than one year with prednisone or prednisolone complained of dyspepsia—but in only two of the patients with this symptom was there roentgenographic evidence of ulcer (gastric in both cases). Gastrointestinal disturbances were a minor problem among patients treated with prednisone by Rothermich and Philips;[15] gastrointestinal x-ray studies were not done

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routinely, but in only five of 48 patients receiving the steroid for periods averaging approximately six months did digestive symptoms develop.

The application of alkalis with prednisone and prednisolone as prophylaxis against gastric distress and peptic ulcers was suggested by Bunim and coworkers,[2,7] and Stolzer and associates[16] found the measure to be effective in reducing digestive symptoms. However, other observers have expressed the belief that antacid therapy is unwarranted,[15] and some have considered that it may be contraindicated, for by lessening symptoms the physician may be lulled into a false sense of security.[10]

EARLIER EXPERIENCES OF THE AUTHORS

Our preliminary studies with prednisone and prednisolone in the treatment of patients with rheumatoid arthritis indicated that digestive symptoms occurred much more frequently than during hydrocortisone therapy.[3,4,5] Among 141 patients treated with the newer analogs, 109 were transferred directly from hydrocortisone. Following the substitution of prednisone or prednisolone, the incidence of digestive complaints rose sharply; the incidence was 6.4 per cent during hydrocortisone administration and 30 per cent while the patients were maintained on prednisone or prednisolone. Gastroduodenal x-ray studies were done in 33 symptomatic cases and in eight of them ulcers (four gastric, four duodenal) were exhibited; three were complicated by gross hemorrhage. Maintenance dosages ranged from 4 to 20 mg. a day and averaged 11.2 mg. for the group. The total daily requirement was divided into three or four doses, which were taken routinely after meals or with food; no other prophylactic measures were invoked. With strict ulcer management (diet, interval feedings, antacids and anticholinergic drugs) the ulcers healed in each instance; steroid administration was stopped in three patients but not in five.

During 1955 the authors began to prescribe complemental antacid preparations in conjunction with prednisone and prednisolone therapy, at first for patients with digestive symptoms, later routinely. A tablet containing dried aluminum hydroxide gel and magnesium trisilicate or magnesium hydroxide was given with each divided dose of the steroids. It was soon evident that the incidence of digestive symptoms was reduced substantially by the concomitant use of alkalis. Early in 1956 our total group of 151 patients being maintained on prednisone or prednisolone underwent routine gastrointestinal x-ray examination.[6] Nine active peptic ulcers (six gastric, three duodenal) were identified, an incidence of 6 per cent; two of the gastric lesions were asymptomatic. No conclusions could be drawn from the study regarding the effectiveness of antacids in lessening the incidence of ulcer formation because patients included in the series did not receive alkalis uniformly; some had taken them regularly for long periods, others for short periods or irregularly, while still others had not taken them at all. Nevertheless, the overall incidence of peptic ulcers was considerably lower than that reported by some investigators.

METHOD OF INVESTIGATION AND GENERAL DATA

The present study was undertaken to determine the incidence of digestive disturbances in a group of 100 unselected patients with rheumatoid arthritis who had taken complemental antacid preparations consistently with each dose of prednisone or prednisolone for continuous periods of a year or longer. The patients were questioned regarding gastrointestinal complaints, and within a period of a month (December 15, 1957, to January 15, 1958) they were subjected to roentgenographic examinations of the upper gastrointestinal tract. At first some patients took a tablet containing dried aluminum hydroxide gel and magnesium trisilicate or magnesium hydroxide with each 2.5 mg. tablet of prednisone or prednisolone, but after May, 1956, the alkalis and steroid were prescribed in a single compressed tablet* (each tablet contained 2.5 mg. of either prednisone or prednisolone combined with 300 mg. of dried aluminum hydroxide gel and 50 mg. of magnesium trisilicate). The medicines were taken after meals, or with a small quantity of food when taken at bedtime. Patients were asked to exclude highly-seasoned and irritating foods from their diets. Modified ulcer diets were prescribed for four patients with known previous, but currently healed, peptic ulcers. Anticholinergic drugs were taken by two patients who had had gastrointestinal hemorrhages in the past.

The distribution of patients as to sex, age, severity and duration of the rheumatoid arthritis is given in Table 1.

Each patient received prednisone or prednisolone combined with antacid preparations for a year or longer. The majority had been maintained beforehand on steroid therapy (hydrocortisone or cortisone and later prednisone or prednisolone) for extended periods. The average duration of continuous steroid administration for the group was 41.7 months, and the range was from 12 to 96 months. Sixty-four of the 100 patients had taken prednisone or prednisolone without concomitant alkalis (for 4 to 22 months; average 11.5 months) before com-

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*Supplied by the Merck, Sharp and Dohme Research Laboratories, Division of Merck and Co., Inc., Rahway, N. J., as "Co-deltra" and "Co-hydeltra."

TABLE 1.—*Composition of Series of 100 Patients with Active Peripheral Rheumatoid Arthritis Treated with Prednisone or Prednisolone Combined with Antacids*

Sex:		*Disease severity:*	
Males	25	Severe	30
Females	75	Moderately severe	36
Age:		Moderate	34
Average: 51 years		Mild	0
Range: 15 to 78 years		*Disease duration:*	
Decade of life:		Average: 138.8 months	
Second	2	Range: 20 to 456 months	
Third	5	Under 2 years	2
Fourth	16	2 to 5 years	27
Fifth	19	6 to 10 years	23
Sixth	26	Over 10 years	48
Seventh	27		
Eighth	5		

bined therapy was begun. Thirty-six patients took the steroids together with antacids from the beginning of treatment. The usual maintenance doses of the drugs are shown in Table 2.

TABLE 2.—*Duration of Steroid Therapy and Maintenance Dosages Employed (100 Patients)*

Total duration of steroid therapy	12 to 96 months (average, 41.7 months)
Total duration of therapy with prednisone or prednisolone combined with antacid agents	12 to 36 months (average, 20.1 months)
Number of patients treated with prednisone or prednisolone alone and later transferred to same steroid combined with antacid agents	64
Number of patients treated with prednisone or prednisolone combined with antacid agents from the beginning	36
Usual daily maintenance dosages of prednisone or prednisolone combined with antacid agents at the time of analysis:	
Range: 5 to 20 mg. Average for the group: 9:45 mg.	
Less than 10 mg.	48
10 to 15 mg.	50
More than 15 mg.	2

RESULTS OF STUDY

Digestive Symptoms (Table 3). Eighteen patients (18 per cent) had symptoms of digestive disturbance, such as indigestion, heartburn, sour eructations, gnawing epigastric distress, postcibal nausea and the like, during the administration of prednisone or prednisolone combined with antacids. In 12 patients the complaints were mild or transient and were not consistent with the diagnosis of peptic ulcer on the basis of symptomatic criteria alone. The distress in six patients was either persistent or frequently recurring and, from description, had qualitative features compatible with those considered characteristic of ulcer.

Among the 64 patients who had been maintained on prednisone or prednisolone therapy without alkalis for variable periods beforehand, there was a decided lessening of digestive complaints after antacids were added. Twenty-four (38 per cent) had significant symptoms before antacid agents were included, as compared with 11 (17 per cent) thereafter. The changes in symptoms following the institution of alkalis are listed in Table 3.

Of interest was the incidence of symptoms among patients with history of ulcers. A diagnosis of peptic ulcer, substantiated roentgenographically, had been made in nine of the one hundred patients before they received steroid therapy. During the administration of prednisone or prednisolone with antacid agents, seven of these (78 per cent) had digestive symptoms, compared with 11 of the 91 remaining patients (12 per cent).

The development of digestive symptoms was influenced by the size of maintenance dose employed. Distress occurred in 12.5 per cent of patients who received less than 10 mg. a day, and in 23 per cent of those receiving 10 mg. a day or more. There appeared to be some correlation between the occurrence rate of symptoms and the total duration of steroid therapy: The rate was 14 per cent among patients treated for less than two years, 19 per cent among patients treated for two to five years, and 20 per cent in patients treated for longer than five years (Table 3). The incidence of symptoms was higher in women (20 per cent) than in men (12 per cent). There was no consistent relationship between gastric complaints and the presence of other individual side effects from the drugs.

TABLE 3.—*Digestive Symptoms in Patients Treated with Prednisone or Prednisolone Combined with Antacid Agents—Summary of Data*

Number of patients with significant digestive symptoms during treatment with prednisone or prednisolone and antacid agents	18 of 100 (18%)
Number of patients with symptoms during prednisone or prednisolone therapy without antacid agents	24 of 64 (38%)
Number of patients with symptoms following the addition of antacid agents	11 of 64 (17%)
Change in severity of symptoms after the addition of antacid agents (24 patients):	
Disappeared	13
Decreased	8
Unchanged	3
Incidence of symptoms in relation to size of daily steroid dosage (100 patients):	
Less than 10 mg.	6 of 48 patients (12.5%)
10 to 15 mg.	12 of 50 patients (24%)
Over 15 mg.	0 of 2 patients
Incidence of symptoms in relation to total duration of steroid therapy:	
Less than 2 years	4 of 28 patients (14%)
2 to 5 years	10 of 52 patients (19%)
Over 5 years	4 of 20 patients (20%)
Incidence of symptoms in relation to past history of ulcer:	
Past history of ulcer (9 patients)	7 (78%)
No past history of ulcer (91 patients)	11 (12%)
Incidence of symptoms in relation to sex:	
Men	3 of 25 (12%)
Women	15 of 75 (20%)

Roentgenographic Findings. The incidence of roentgenographically demonstrable ulcers in this series was small (Table 4). Only three active ulcer craters were detected among the 100 patients, two prepyloric in location and one in the duodenum. Two of these patients had previous history of peptic ulcer; pretreatment x-ray studies disclosed a scarred duodenal bulb in one and slight prepyloric narrowing, but no ulcer crater, in the other. The ulcers were asymptomatic in two of the three patients. The average maintenance dosage was 8.75 mg. a day for one patient and 10 mg. a day for the other two. The routine roentgenographic studies disclosed various other abnormalities, which are listed in Table 4.

COMMENT

The pathophysiologic mechanisms involved in the production of digestive disturbances during treatment with adrenocortical steroids in general, and with prednisone and prednisolone in particular, are far from understood. The general thesis that peptic ulcers result from failure of the gastroduodenal mucosa to withstand the digestive action of gastric acids and pepsin may be accepted, but the specific factors at fault in steroid-associated ulcers remain conjectural. Studies in human subjects indicate that corticosteroid administration causes a rise in the secretion of gastric acids and pepsin in some patients but not in others. Forsham and co-workers[9] observed that the elaboration of hydrochloric acid was increased in approximately one half of patients receiving corticosteroid therapy. Among those showing hyperacidity, prednisone and prednisolone provoked the secretion of about twice as much free hydrochloric acid as did hydrocortisone when the substances were taken in dosages of comparable anti-inflammatory potency. But it would seem, as Kirsner[12] suggested, that factors other than hypersecretion may be implicated. This may be true particularly with gastric ulcers, which occur in unusually high proportions in steroid-treated patients, because such lesions may develop with normal or subnormal outputs of acid and pepsin. The possibility of lowered gastroduodenal tissue resistance from prolonged steroid administration, or, in the case of rheumatoid arthritis, from chronic debilitating disease also, has received consideration in pathogenesis.

Regardless of theoretical and controversial issues, it has been evident to us that digestive symptoms, both in respect to frequency and severity, are reduced substantially in patients treated with prednisone or prednisolone when the drugs are taken in combination with antacid preparations. Furthermore, the low incidence (3 per cent) of roentgenographically demonstrable ulcers suggests that the regular use of acid-neutralizing agents may afford at least partial protection against peptic ulcers. Certainly the occurrence rate for ulcers in our series was decidedly smaller than that reported by some investigators from prednisone and prednisolone therapy given without complemental antacid agents, and actually it was not greater than that which has been noted in rheumatoid arthritic patients treated by conservative measures alone (6 per cent to 8 per cent;[14] 3 per cent in women, 6 per cent in men[1]). All the patients here reported upon were examined roentgenographically within a span of 30 days and the results represent an incidence for peptic ulcer at one particular time during the course of treatment. How many ulcers may have occurred, and then subsequently healed, during the many months of continuous administration is not known. Of interest, and perhaps of importance, is the fact that no complications of ulcer, such as perforation or hemorrhage, developed among patients in this series, and only one instance of gastrointestinal hemorrhage has been encountered in our practice since antacid agents have been used routinely with prednisone and prednisolone.

TABLE 4.—*Gastroduodenal Abnormalities Observed Roentgenographically in 100 Patients Treated with Prednisone or Prednisolone Combined with Antacid Agents*

Active peptic ulcer (gastric, 2; duodenal, 1)	3
Healed peptic ulcer (gastric, 1; duodenal, 3)	4
Irritable duodenal bulb	3
Duodenal diverticulum	4
Gastric diverticulum	2
Paraesophageal hernia	28

The relation of digestive disturbances to the size of the maintenance dose of steroid employed deserves comment. The frequency of these complications, like other adverse effects from the drugs, increases as larger daily amounts are used. Undoubtedly the low incidence of ulcer in the present study may be ascribed in part to adherence to low dosage schedules. Despite the fact that the majority of patients (66 per cent) had severe or moderately severe disease, the daily maintenance dose averaged 9.45 mg. for the group, and only two of the 100 patients received amounts greater than 15 mg. a day. The influence of dosage on the occurrence rate of ulcers associated with prednisone and prednisolone has been emphasized by other investigators. Kern, Clark and Lukens[11] reported ulcers in three of 14 patients (21 per cent) who were receiving dosages averaging 20 mg. or more a day, and in none of 54 patients taking 15 mg. a day or less. With prednisone the incidence of ulcer, in the experience of Kammerer, Freiberger and Rivelis,[10] was as follows: Approximately 10 per cent with dosages of 2.5 to 7.5 mg.; 45 per cent with dosages of 10 to 15 mg.; and 50 per cent with dosages greater than 15 mg. a day.

Of 16 patients found to have peptic ulcers by Bunim and collaborators,[8] 13 received prednisone or prednisolone in daily dosages of 15 to 30 mg., and three were maintained on 10 mg. or less.

Individual susceptibility, especially as indicated by previous history of peptic ulcer or of ulcer-like distress, plays an important role in the development of digestive disturbances during treatment with prednisone or prednisolone and other steroids with adrenal cortical action. This was again obvious in the present study when it was recorded that 78 per cent of patients with a previous history of peptic ulcer had digestive complaints, in contrast to 12 per cent of patients with no history of ulcer in the past. Moreover, two of the three peptic ulcers which were demonstrated roentgenographically occurred in patients known to have had ulcers before treatment, and it is probable the lesions were reactivations.

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Cancer, Coronary Artery Disease and Smoking

A Preliminary Report on Differences in Incidence Between Seventh-day Adventists and Others

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FRANK R. LEMON, ***M.D.,*** **Loma Linda**

• A study was made of the incidence of certain types of disease among Seventh-day Adventists, a religious group of special interest because they refrain from smoking and drinking.

Epidermoid cancer of the lung, previously shown to be related to smoking, was 10 times less common among Seventh-day Adventists than among the general population, even among those Seventh-day Adventists living in the Los Angeles area where all are exposed to smog. Similarly, cancers of the mouth, larynx, and esophagus, previously shown to be related not only to smoking but also to heavy drinking, were at least 10 times less common among Seventh-day Adventist men than among men of the general population. All other types of cancer, with the exception of cancer of the bladder and cervix, occurred among Seventh-day Adventists with the same frequency as in the general population. The latter occurred slightly less than in the general population.

Myocardial infarction in Seventh-day Adventist males was less frequent and occurred at a later age than among males in the general population; while the age distribution of the disease among the Seventh-day Adventist females was similar to that of females in the general population.

DURING RECENT YEARS much evidence, presumptive, statistical, pathological, biological and chemical, has been accumulated pointing to smoking, particularly of cigarettes, as a cause of primary cancer of the lung.[8] The causative connection between smoking and lung cancer has now been regarded as proved by the Surgeon General of the U. S. Public Health Service and the British Ministry of Health.[6,7] Our own studies have indicated that occupational exposures and air pollution play a much lesser role in the development of lung cancer.[12] As far as cancer of the mouth, larynx and esophagus are concerned, all types of smoking have been shown to play an important etiologic role.[5,9,10] However, in these locations cigar and pipe smoking are known to carry a greater risk than cigarette smoking. Heavy smokers were shown to have a further increased risk of getting these diseases if they were also heavy whiskey consumers.

In the development of coronary artery disease and myocardial infarction a number of etiologic factors have been suspected, including diet, especially animal fats, endocrine factors, stress and strain, as well as smoking.[4] The latter factor was most recently emphasized in a study by Hammond and Horn which showed that the incidence of myocardial infarction is 70 per cent greater in smokers than in nonsmokers.[1]

The present study was conducted to further elucidate some of the above points by noting the hospital incidence of these diseases, as well as the incidence of other cancers in a nonsmoking and nondrinking population, largely located in urban and industrial areas. The more detailed findings of this study will be reported subsequently.[13] In addition, one of us (F. L.) is engaged in a prospective study covering the total Seventh-day Adventist population in California.

BACKGROUND DATA

This study is based upon the analysis of hospital records of eight Seventh-day Adventist hospitals including the following: Loma Linda, White Memorial, Glendale, Paradise Valley and St. Helena in California; Hinsdale Hospital, Hinsdale, Illinois; Washington Sanitarium and Hospital, Washington, D. C.; and New England Sanitarium and Hospital, Boston, Massachusetts. It involved a survey of all cancer and coronary artery disease reported in these hospitals for the study period and included 8,128 non-Seventh-day Adventists and 564 Seventh-day Adventists with such diagnoses. The total number of cases reviewed, in both male and female patients, was 3,679 for cancer, 3,082 for coronary artery disease and 1,931 for myocardial infarction. Fifty-two per cent of the total cases came from hospitals in the Los Angeles area. In addition to studying the

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patients' case records, we interrogated Seventh-day Adventist males and females drawn from the Southern California hospital patient population to obtain information about their background and environmental habits. Fifty-five per cent of Seventh-day Adventists over the age of 40 were found to have belonged to another religion (usually Protestant) before joining the Seventh-day Adventist Church. Very few females had a history of smoking. Seventy-one per cent of Seventh-day Adventist males over the age of 40 were found to have never smoked; 23 per cent, though having done so, smoked for less than 20 years. Thus, only 6 per cent of the Seventh-day Adventist males had a smoking history of more than 20 years, which compares to 85.4 per cent in a sample of the general population. Only 3.5 per cent had still smoked occasionally during the five-year period after joining the church. Therefore, as far as long-term smoking habits are concerned, the Seventh-day Adventist males are similar to females in the general population.

Alcohol consumption is also uncommon among Seventh-day Adventists of both sexes. Seventy-seven per cent of males never drank alcohol and only 0.5 per cent of the males admitted some drinking after joining the church. Thus, for all practical purposes they were a nonsmoking and nondrinking population.

The dietary intake of Seventh-day Adventists also differs from that of the general population. Only 41 per cent of the Seventh-day Adventists eat meat, and those who do, eat less than does the general population. We found only 5 per cent among the general population who do not eat meat. Only 9 per cent of the Seventh-day Adventists drank coffee regularly and 17 per cent drank tea. Egg and butter consumption was similar to that of the general population; milk consumption was found to be higher. Thirty-three per cent of the Seventh-day Adventist males consumed more than three glasses of milk a day, compared with 13 per cent among the controls. However, the diet of Seventh-day Adventist males and females was quite similar. These background data are based upon interviews with 261 male and 199 female Seventh-day Adventists. Further interviews, yielding additional details, especially of dietary habits, are being carried out and will be presented in our final report.[13]

Except for a somewhat larger proportion of professional people, the occupations of Seventh-day Adventists in this group are similar to those in the general population.

In summary, the Seventh-day Adventist group was for the most part made up of persons who had never smoked or had not smoked for long terms and who did not use alcoholic beverages, but otherwise differed from the general population only in lower intake of meat, coffee and tea and higher intake of milk.

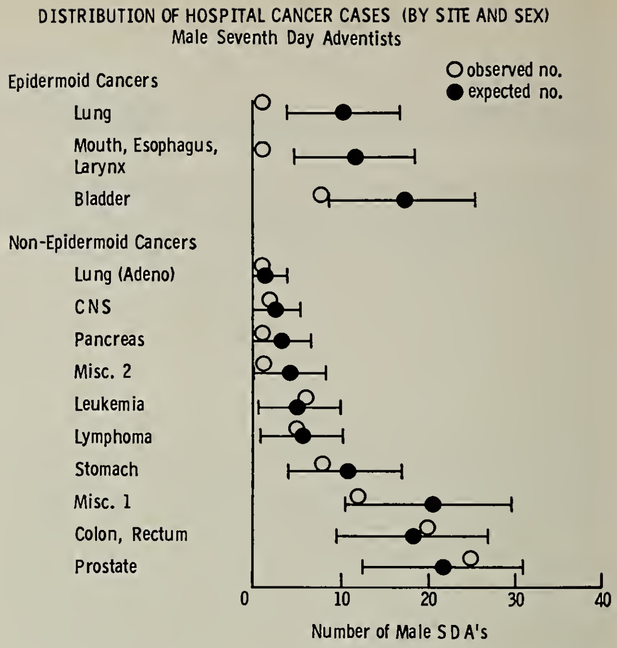

Chart 1.—The actual number of Seventh-day Adventists at each site is represented by the white circle. The black line represents the range into which the actual number of Seventh-day Adventists should fall if the following assumptions are true: (1) Seventh-day Adventists have the same chance of appearing at a given site on the chart as the non-Seventh-day Adventists and (2) the Seventh-day Adventists are 8.8 per cent of the non-Seventh-day Adventist hospital population. If these assumptions are true, then the actual numbers of the Seventh-day Adventists will fall within the given ranges *approximately* 95 per cent of the time.

In Charts 1 and 2, the classification "Miscellaneous 2" embraces skin cancers of all types and "Miscellaneous 1" includes all cancers not otherwise listed.

Expectations

If the factors of smoking and alcohol consumption are of etiological significance in the development of certain diseases, then the following conjectures could be made as to these diseases in this group:

1. Lung cancer, found to be significantly related to smoking but not to drinking, would be less by at least 90 per cent in the males of this study group than in the general population, the male and female rate tending to be equal.

2. Cancer of the mouth, larynx and esophagus, found to be related to smoking and heavy drinking, would be lower in the study group by at least 90 per cent, and the male and female rates would again tend to be equal.

3. Myocardial infarction would be significantly less, particularly in the younger males, and the male and female rates as well as the age distribution among males and females would tend to be equal.

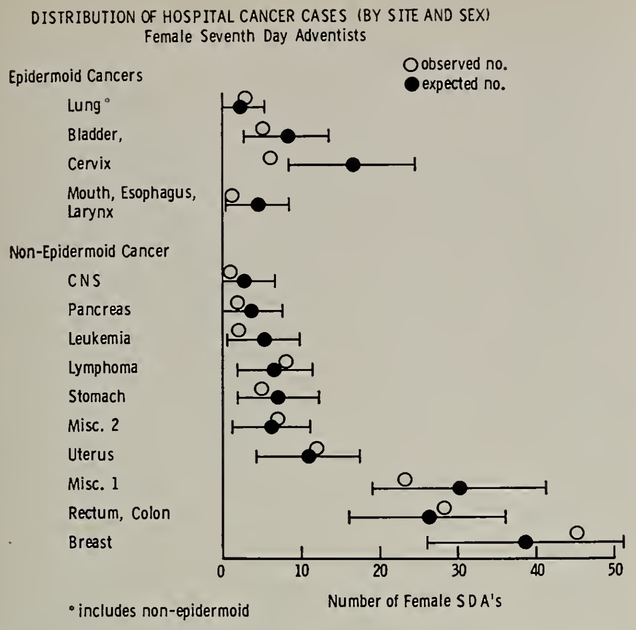

Chart 2.—See note under Chart 1.

RESULTS

Cancer

Chart 1 shows the results for the cancer cases, in males, presented as observed and expected numbers.* The expected values are based on the per cent of the Seventh-day Adventist hospital admissions, which is 8.8 per cent of the non-Seventh-day Adventist group. It will be noted that for the non-epidermoid cancers the observed values are within statistical expectation; this also includes adenocarcinoma of the lung. The difference for bladder cancer is just statistically significant. This is of interest in view of the fact that bladder cancer has also been shown to have some association with smoking.[2] The differences are greatest for cancer of the mouth, esophagus, larynx and lung. There were 133 cases of cancer of the mouth, lip and esophagus among non-Seventh-day Adventists. The expected number of such cases among the Seventh-day Adventists was 11.8, but we only found one cancer in this area, a cancer of the lip. Cancer of the lip is known to be precipitated by overexposure to sunlight. There were 118 cases of lung cancer in non-Seventh-day Adventists, all histologically proved to be either epidermoid or anaplastic. The expected number in Seventh-day Adventists was 10.4. We found only one. This one case occurred in a 63-year-old Seventh-day Adventist man who, unlike most Seventh-day Adventists, had been a regular one-pack-a-day smoker for 25 years before joining the church in 1941. Lung cancer developed in 1954. In addition, this man had long-term exposure to metal dust and metal burning.

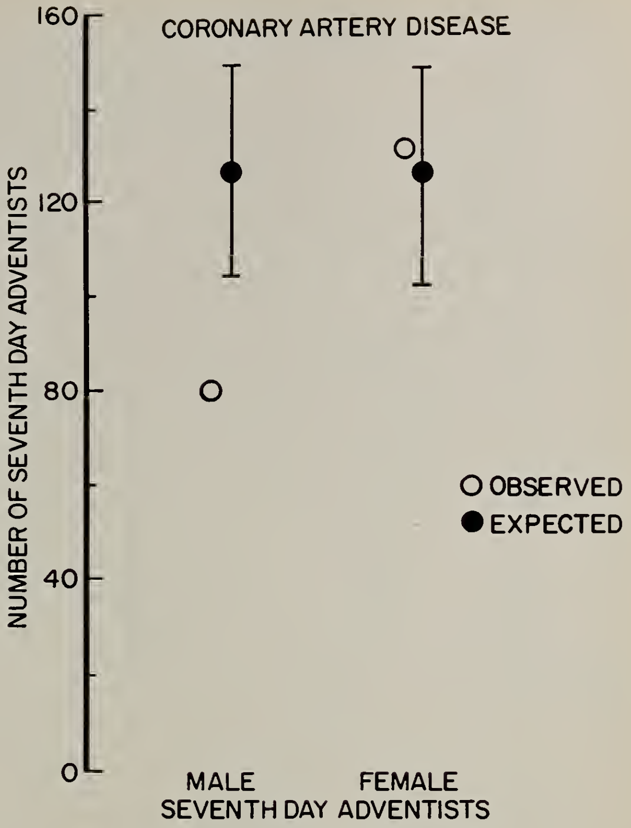

Chart 3.—See note under Chart 1.

The data for females is shown in Chart 2. The rates for lung, mouth, esophagus and larynx cancer among male and female Seventh-day Adventists are similar, giving a sex ratio near 1:1. Among the cases in females, no significant difference was found in the expected and observed values except for cancer of the cervix. There were 186 cases in the non-Seventh-day Adventists; the expected number for Seventh-day Adventists was 16.4, and we found six. This may be a result of better hygiene among Seventh-day Adventist males as compared with males in the general hospital population as seen in this study, a factor considered to be important in the incidence of cancer of the cervix in previous studies.[11]

Coronary Artery Disease

For both coronary artery disease and myocardial infarction the observed values were significantly lower for Seventh-day Adventist males and were similar to the expected values for Seventh-day Adventist females (Charts 3 and 4). In view of the more definitive diagnosis of myocardial infarction as compared with other coronary artery disease, the former data may be more pertinent, although both show the same trend. Both coronary artery disease and myocardial infarction occur among Seventh-day Adventist males at about 40 per cent less than ex-

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*The statistical analysis of this data was carried out by Dr. I. J. Bross and Mrs. Charlotte W. Zweifach.

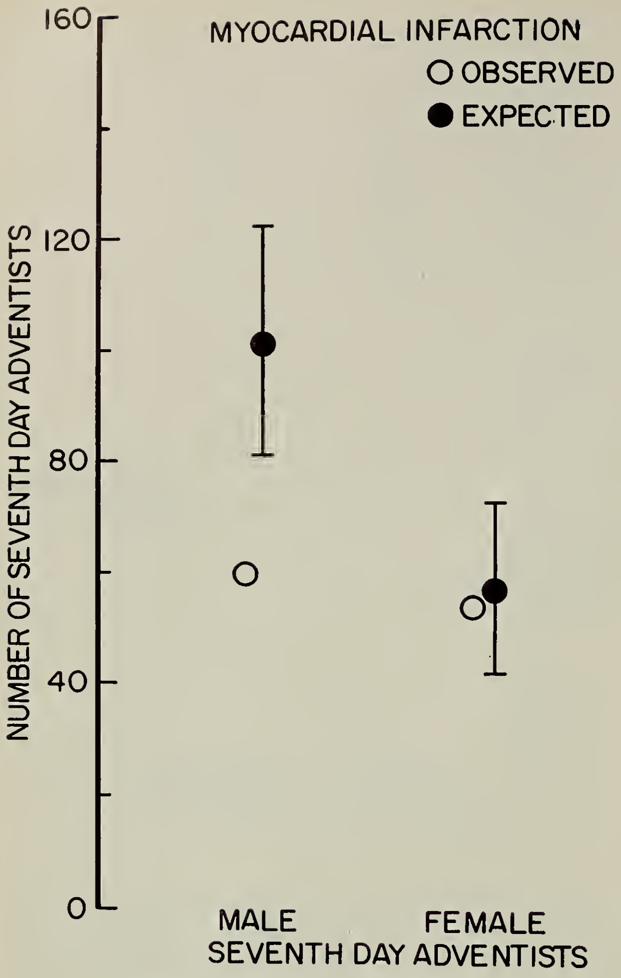

Chart 4.—See note under Chart 1.

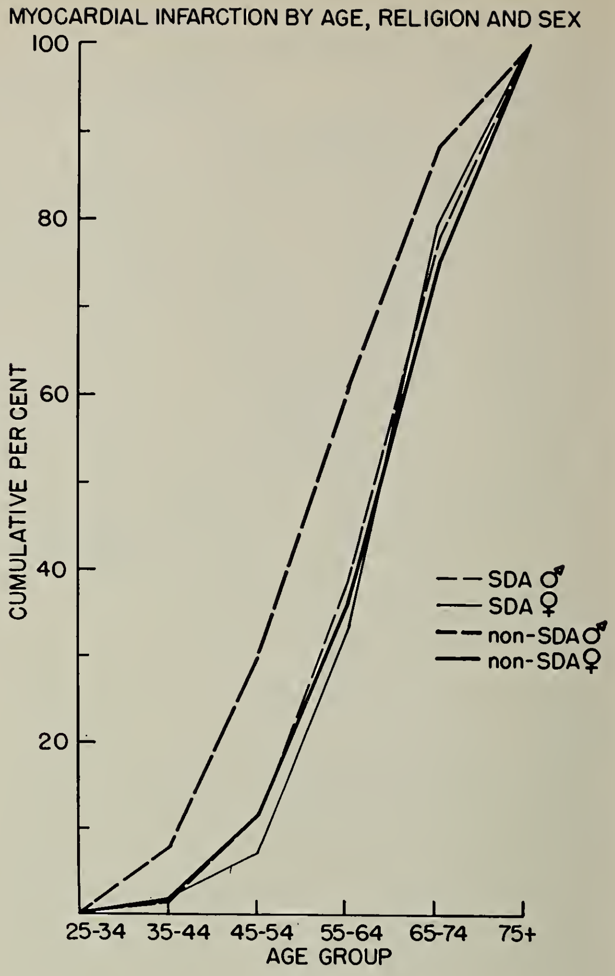

Chart 5.

pected rates as compared with the male controls in this study. Of particular interest was a study of the age distribution of coronary artery disease and myocardial infarction as summarized by the accumulated age total in Charts 5 and 6. These graphs show the same age distribution for these diseases among the Seventh-day Adventist males and females and non-Seventh-day Adventist females, while showing a decidedly earlier onset of these conditions among non-Seventh-day Adventist males. Thus, we observed that Seventh-day Adventist males not only have less than expected coronary artery disease and myocardial infarction, but when these disorders do develop, they do so later in life, at roughly the same age distribution as in females in the general population. Among these Seventh-day Adventist males, less than 2 per cent of the attacks of heart disease occurred before the age of 44 as compared with 8 per cent under that age in the non-Seventh-day Adventist group; 11.6 per cent occurred before the age of 54 as compared with 30 per cent; and only 38 per cent occurred before age 64 as compared with 62 per cent in the non-Seventh-day Adventist group.

DISCUSSION

The present data have shown that in this nonsmoking population lung cancer among men occurs at least 90 per cent less often than in the associated general population, even though a majority of the nonsmoking population lives in smog-polluted areas of Southern California. It has also been shown that in such a population lung cancer occurs equally in men and women. These data are, therefore, consistent with previous estimates of lung cancer incidence in a nonsmoking or minimal-smoking population and are consistent with the conjectures stated earlier. From these findings, smog does not seem to have a significant role in the development of lung cancer. Although dietary differences exist between Seventh-day Adventists and non-Seventh-day Adventists, such dietary factors have not previously been shown to play a role in the development of lung cancer and it cannot be assumed that they accounted for the difference observed here.

The data also reveal that in this nonsmoking and nondrinking population the incidence of cancer of the mouth, larynx and esophagus is reduced from expected rates by at least 90 per cent and that the incidence in the two sexes is equal, consistent with the previous conjectures. It could be expected that conditions which relate both to smoking and to drinking would be especially low in a population group which does neither. Again, since the dietary differences existing among the Seventh-day Adventists have not previously been shown to influence the development of the above diseases, such differences are not thought to account for the scarcity of upper respiratory and esophageal cancers in this group.

Of particular interest was the lower incidence of coronary artery disease and myocardial infarction in the study group and the fact that this low rate is prominent in the younger males, whereas the incidence in females was as expected. The present data, of course, do not rule out the possibility of stress and strain, endocrine and dietary factors playing a part in this reduction. There is no clear evidence, however, that Seventh-day Adventists live under less stress and strain than the general population. Diet is certain to play a significant role in the development of atherosclerosis. Certainly the dietary pattern among Seventh-day Adventists differs from that of the general population. We are still in the process of determining the extent to which this is true. Their intake of meat is low while their intake of milk is high. However, since the diet of male and female Seventh-day Adventists is similar, we do not believe that dietary changes can readily account for the much less than expected male rates of coronary artery disease. It seems more reasonable to account for this lower incidence among men by their similarity to women in low tobacco consumption. The present data are thus consistent with the findings presented by Hammond and Horn and other investigators showing smoking to be a factor in the development of myocardial infarction. We prefer to consider this association as a precipitating factor rather than causative, as in the instance of cancer of the lung. We propose that smoking precipitates symptoms of either coronary artery disease or myocardial infarction in an already diseased coronary system. Regardless of whether we refer to it as a precipitating or causative factor, if tobacco increases the incidence of so important a disease as myocardial infarction, it is a matter of just concern.

Factors of Selection

Little[3] pointed out that the relationship of smoking to lung cancer may be statistically sound, but that the relationship may not be one of cause and effect.[3] He proposed that there may exist a neurohormonal factor which both produces lung cancer and makes a person smoke. With the present data added to the already overwhelming evidence linking smoking to lung cancer, Little would now have to propose that this neurohormonal factor not only predisposes to lung cancer and causes one to smoke, but also prevents one from joining the Seventh-day Adventist Church, a combination of factors virtually impossible to accept.

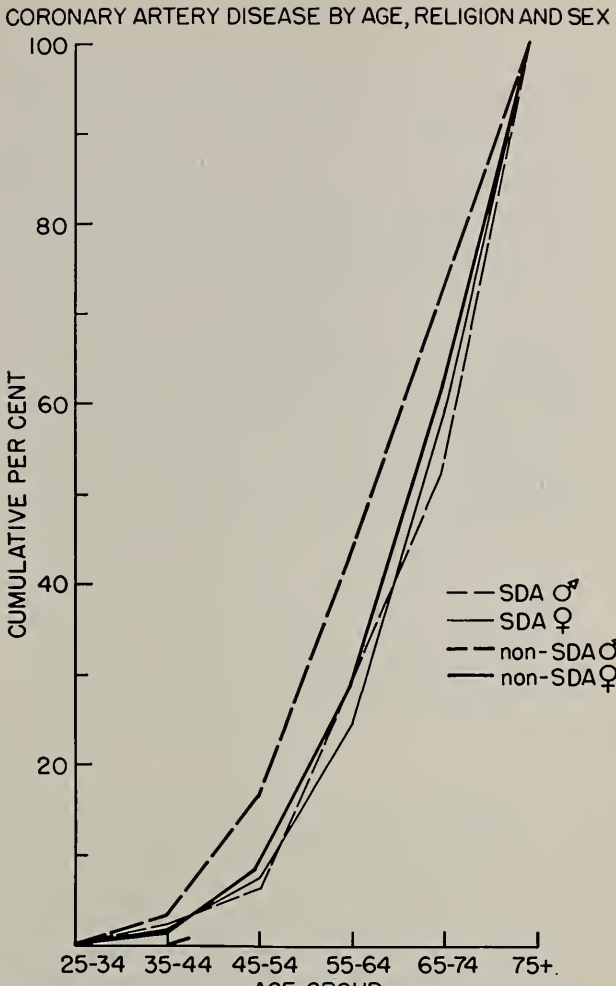

Chart 6.

The evidence presented in this report would be less important if it did not fit into a pattern of causation or precipitation established by previous epidemiological and experimental studies. As in any phase of life, especially when the issues concern economic or emotional interests, and as long as man is man, there will be dissenters. But if the sum total of the scientific evidence is sound, as we believe it to be in the case of tobacco, these conclusions and interpretations concerning cancers and coronary artery disease will stand the test of time. The dramatic importance of lung and upper respiratory cancer and coronary artery disease as a cause of morbidity and mortality in men today calls for the application of the preventive measures suggested by this sum total of evidence.

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The Large Inguinal Ring

Its Significance in the Diagnosis of Inguinal Hernia

HOMER S. ELMQUIST, *M.D.*, Los Angeles

• A large external inguinal ring is often reported by a medical examiner as a "potential hernia." This finding may cause the subject to be denied job opportunities and may make him apprehensive about many normal activities.

The author believes that unless a sac is present and is causing symptoms that necessitate surgical relief, the term hernia should not be used, regardless of how it is qualified. The ordinary intraabdominal stresses due to coughing, sneezing, etc. increase intraabdominal tension more than heavy lifting, except with loads of nearly the body's own weight. The lifetime effect of such stresses can contribute to the development of a direct hernia, but most of these cannot be eliminated.

In this day of annual examinations of employes and preemployment examinations, many men are examined for hernia. In many instances the physician is uncertain whether or not a hernia is present and even more uncertain as to whether a hernia is likely ever to develop. Errors in diagnosis are not infrequent. A fairly large hernia retained behind a small ring can be easily missed. This is not too serious, because sooner or later symptoms will lead to further examination and correction of the oversight; but diagnosis of hernia if none is present can be serious. It may deprive a man of a job he has applied for, or cause him to have an operation he does not need or may limit his work and pleasure needlessly.

Common causes of erroneous diagnosis of hernia are:

1. Subjective complaint of hernia.
2. Complaint of tenderness or pain in the inguinal region.
3. An impulse, not due to hernia, transmitted to the examining finger when the patient coughs.
4. A lipoma of the spermatic cord.
5. A large external inguinal ring, or so-called "potential hernia."

The object of this presentation is to discuss the significance of the large external inguinal ring.

A hernia is the protrusion of a sac of peritoneum through a defect in the abdominal parietes. An *indirect hernia* arises at the internal ring and emerges through the inguinal canal, posterior to the aponeurosis of the external oblique muscle and anterior to the transversalis fascia, where it can be seen or palpated subcutaneously at the external ring. The internal oblique muscle varies in the amount of support it adds to the canal. If the muscle is weak, or does not extend far enough distally, it does not protect the transversalis fascia. The fascial tissue making up the transversalis fascia and the external ring may yield in a gradual stretching until a direct hernia develops. A congenitally large external ring may predispose to it. A *direct hernia* protrudes directly through the abdominal wall at the external ring, develops slowly over the years, rarely becomes scrotal or complete and, since the ring is as large as the sac, almost never strangulates. Further, it seldom causes symptoms during the early years of development, and as a rule becomes symptomatic only when large. Thus, a direct inguinal hernia is an acquired hernia which develops slowly over the years and is more likely to develop in persons who are older, obese, or debilitated and perhaps have some degree of bladder neck obstruction or chronic cough.

MECHANISM OF INDIRECT HERNIA

An indirect inguinal hernia may be found at any age, and may occur in persons who have normal structures at the external ring. It also occurs in persons who have or are likely to have a direct inguinal hernia as well. Whether or not an indirect inguinal hernia occurs depends upon whether, after descent of the testicle, the peritoneum sealed off or persisted as a pouch or a canal. At operation, many varieties of indirect sac are found, with or without a hydrocele. These represent variations of a single cause, the persistence of a congenital remnant. Whether an indirect hernia develops appears not to be related to the nature of the inguinal canal and the external ring. However, if there is a good internal oblique muscle and the external ring is small, the onset of symptoms may be delayed to advanced age, when a large hernia never noted before may manifest itself suddenly. In such instances a well-developed sac previously retained behind a

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Chairman's Address: Presented before the Section on Industrial Medicine and Surgery at the 86th Annual Session of the California Medical Association, Los Angeles, April 28 to May 1, 1957.

small external ring, slips through the ring, causing local pain, a mass and sometimes abdominal pain, gastrointestinal symptoms or strangulation.

It is this dramatic onset which has resulted in use of the term rupture as synonymous with hernia. This use is unfortunate, for the term implies (as indeed the patient may think) that something has broken or torn, or that structures have suddenly parted. This premise leads to a further rationalization that if something has "ruptured," some force must have caused the rupture. Usually the patient quickly inculpates something he recently did or experienced, whether or not the "incident of force" he selects was sufficient to have been a factor. This placing of blame is especially likely if someone else can be held to be financially responsible for the incident said to precipitate the symptoms. Thus, physicians are frequently called upon to determine whether or not a hernia resulted from a specific incident; and it behooves the examiner to be as accurate in his diagnosis as possible. Large, definite hernias present no diagnostic problem; small or questionable hernias sometimes do.

METHOD OF EXAMINATION

In making an examination for hernia, the physician should be seated comfortably and steadily and have the patient stand before him. The patient should not be permitted to lie down beforehand, for the hernia might reduce and escape detection. The testicle should be down in the scrotum and the scrotum relaxed—careful traction on the testicle will accomplish this. First the uninvolved side should be examined so that the patient can become familiar with what is to be done and the physician can observe the size of the ring, the presence or absence of lipomata of the cord, and the patient's threshold for tenderness or pain.

Digital examination should be begun by inverting the skin of the scrotum well below its junction with the abdominal skin and bringing the finger up anterior to the cord structures to the external ring, which can be evaluated as to size and tenderness. If the finger is kept anterior to the cord so as to avoid pressure on the cord structures rarely will tenderness be noted but it can be determined whether or not this is the focus of the patient's distress. If the ring is large enough to admit it, the finger may be inserted far enough to determine the nature of the posterior wall. The finger should be withdrawn slightly before the patient is told to cough. Of course, the posterior wall will always make impact against the finger at the time of cough, just as would the rectus muscle. To determine if there is a cough impulse caused by a sac, the examiner withdraws his fingertip to a level even with or just below the external ring and determines if a sac follows it and strikes the tip when the patient coughs again. One must not mistake for the cough impulse the outward thrust of the transversalis muscle or the compression or sphincter action of the internal oblique muscle, which tends to squeeze the finger. Such a finding is normal. The presence of a lipoma may be confusing, for it too may come down and thrust against the examiner's finger, but distinguishing features are that it does not seem to be expansile to the sides as well as down, does not gurgle, does not reduce beyond the internal ring and can, by traction on the cord, sometimes be brought below the external ring and palpated between the fingers to determine its nature.

Rarely will an indirect hernia be overlooked if the external ring is large enough to admit a finger. It is easier to follow the canal with the finger if the right hand is used for the patient's right side and vice versa.

A direct hernia can be determined by pressing the finger against the posterior wall of the canal just above the pubic ramus. With the patient relaxed and not coughing, a direct hernia can be inverted and a diffuse weakness of the posterior wall is felt as a depression. On withdrawing the finger beyond the external ring, the hernia sac follows beyond the external ring as far as the size of the sac permits. If no depression can be felt after inversion of the tissues by the finger, and if on withdrawal of the finger from the external ring there is no eversion or out-pouching beyond the external ring, then there is no sac and hence no hernia, no matter how big the external ring may be. If on coughing nothing comes down upon the finger after it is withdrawn from the level of the ring, there is no cough impulse. If the finger is not withdrawn from the ring, an impulse will be felt, but not a cough impulse.

In short, a hernia is a sac of peritoneum; and if a sac is present, a hernia is present; no sac, no hernia.

As to "potential hernia," it is my opinion that this is an ambiguous term which has no constant or universal meaning and is on occasion used as a protection by physicians who are uncertain of what they have observed upon examination or of the meaning of their observations. It is true that a large ring associated with a poorly developed internal oblique musculature leaves an unsupported transversalis fascia which in time might develop into a direct hernial sac; hence, any significantly large ring can be regarded as a "potential hernia." But how large a ring is significant? And how "potential" is this enlargement? Does it mean a hernia will develop in six months, six years or 20 years?

Turning to the second question first, it is my opinion that if a bulge of transversalis fascia is sufficiently large to constitute a sac and if it is causing unmistakable symptoms that would necessitate surgical repair for relief, it is a hernia and should be diagnosed as such. If it does not fit these criteria, then it does not constitute a hernia and should not be diagnosed as a hernia, no matter what modifying word is placed in front of it. In a preemployment physical examination, making a diagnosis of potential hernia is usually unjustified. It may deprive the patient of a job he wants or force him into an operation he does not need, in order to get the job. In short, there is no justification for an operation "to tighten the ring" or for a diagnosis which may lead to this procedure. A patient with a large inguinal ring may go for several decades or a lifetime without symptomatic hernia, and no one can prognosticate any further than that for most of the other portions of the body.

What about restrictions on the kind of work or the amount of lifting a man who has one or two large inguinal rings should be allowed to do? It seems useless to restrict lifting in order to prevent eventual development of a hernia. Physicians should recognize that it is impossible to control coughing, sneezing, and other body functions, which increase intraabdominal tension more than most heavy lifting except with loads of nearly the body's own weight. All these normal actions contribute to the development of a direct hernia just as drops of water can wear away a rock. Since these more common factors of ordinary living cannot be eliminated, it seems indefensible to cripple a man economically by attaching undue importance to the less common factors of work.

How large a ring is significant? Inequality in size between rings is not significant. For a person to have both hands or both feet or both nares exactly equal in size is the exception rather than the rule. So it is with external rings. In thousands of examinations I have noted that in most patients both rings will admit the tip of the average-size index finger; therefore a ring cannot be deemed "too large" merely because it admits the tip of a finger. Only a rare ring associated with a huge hernia admitted two fingers; therefore the range between large and too large is not exact and reliance must be placed on whether a hernial sac comes through the ring rather than on ring size alone. A small ring can be a greater diagnostic hazard by causing an indirect hernia to be missed. One can always be more confident that a hidden hernia has not been missed when the ring admits the examining finger than when it does not.

CONCLUSION

The diagnosis of inguinal hernia is as simple as the definition of a hernia. Either a peritoneal sac is present or it is not. If a sac can be demonstrated, there is a hernia. If there is no demonstrable sac on careful, properly performed physical examination, there is no hernia. A large inguinal ring is not a hernia and has no significance as regards an indirect hernia except that in its presence an indirect hernia is not likely to be overlooked. A large ring may but does not necessarily signify that if the patient lives long enough, gets fat enough, and develops urinary or pulmonary symptoms enough, a direct inguinal hernia may develop; however, the term "potential hernia" has little meaning with regard to symptoms or to the ability to do heavy work.

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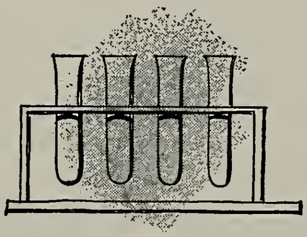

Medico-Legal Aspects of Traumatic Epilepsy

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• The medico-legal problems of cranial injuries require a broad assessment of many factors, not always related to the nervous system, and a nicety of judgment in correctly evaluating the role of each factor in relation to all of them.

Seizures in the period immediately after trauma are not necessarily precursors of later development of epileptic attacks. If such seizures do occur, it can be said in general, from statistical data, that the sooner they occur after injury the less the likelihood of disabling attacks later. It would seem a reasonable medical probability that if a patient has no neurological symptoms or deficit, has a normal electroencephalogram and has gone two years after injury without evidence of seizures, he will not have epilepsy.

Putting a label of "post-traumatic epilepsy" on a patient, unless he is known to have had authentic seizures, may stigmatize him without warrant and lead to unjust settlement of litigation or to unreasonable compensation awards. In doubtful cases, perhaps an equitable solution of compensation for damage would be to award an insurance policy providing suitable payments if disabling seizures should develop later as a sequel of cranial injury.

It is almost impossible to estimate the true incidence of the epileptic states, for there are undoubtedly many persons who have unrecognized seizures or who never seek medical help. The magnitude of the epileptic problem may be noted in a statement by Lennox:[3] "Epilepsy constitutes something like 10 per cent of the Nation's neuropsychiatric burden." According to the American Branch of the International League Against Epilepsy, the estimated rate of known epilepsy in this country is 1 in 200; other estimates are that as many as 1,500,000 persons have the disease. It is further estimated that one person in ten has a dysrhythmic electro-encephalogram; and it is possible that some of them have unrecognized seizures. With the exception of heart disease, then, there are few chronic illnesses commoner than epilepsy for which specific therapy can be offered.

In general, two forms of epilepsy are recognized: Primary, or idiopathic, and secondary. Primary epilepsy is the commonest. Many theories have been advanced concerning the cause of this form of the disease, but thus far none of them can be fully accepted. Many pathologists have observed fairly distinct lesions, in the form of glial proliferations, in the brains of subjects who had primary epilepsy; but it is the belief of some investigators that such changes may well result from the seizures, which are associated with changes in flow of blood and metabolic activity. It is probable that primary epilepsy is the result of biochemical rather than structural changes in cerebral tissue, but a great deal more work remains to be done in this field. Heredity seems to be a definite factor.

Secondary epilepsy results from specific structural changes within the brain and may be associated with a variety of pathologic conditions, including infection, neoplasm, trauma and vascular, metabolic and degenerative disease.

In cases of known injury to the head, such symptoms as headache, dizziness and mental aberrations are considered a normal consequence of the trauma in the period immediately afterward. But at what point are they no longer normal consequence? When do they become pathological? There is no clear-cut final answer. Experience has shown that a young patient receiving a nonpenetrating cranial injury that causes no more than a few minutes' unconsciousness and no neurological deficits, has symptoms for no more than five or six weeks. If they persist indefinitely, they are considered functional. With more severe injuries and longer periods of traumatic unconsciousness, the post-traumatic symptoms, usually associated with neurological deficits, may last for months or years.

One cannot say in a given case what the "normal" course of recovery will be, for individual departures from a statistically valid general trend for a group of cases may be great.

The occurrence of convulsion is undoubtedly the most spectacular of the sequelae of a head injury. For some time the early development of seizures has been considered of lesser significance than late-developing epilepsy. It has been noted that such attacks are frequently Jacksonian and often do not recur after the injury has healed. Reporting on data obtained in World War I, Credner[2] stated that of 41 patients with post-traumatic epilepsy 16 had no further attacks after the wound healed. Baumm[1] observed that 55 per cent of patients who had attacks in the first week after trauma, 41 per cent of those who had attacks before the end of one month and 31 per cent of those who had them within three months had no later attacks. Penfield and Shaver[4]

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concluded that early seizures are only a symptom and that fewer than 30 per cent of patients with this symptom will have recurring epilepsy. Russell and Whitty[5] observed that 20 of 56 patients with convulsions occurring in the first month had no further seizures. Thus it might be concluded that patients with early seizures often have a good prognosis.

The incidence of chronic epilepsy after penetrating wounds of the dura mater is variously reported at from 20 to 50 per cent. If the dura mater is not penetrated the generally reported incidence is considerably less. The attacks may be focal, with an aura in any sphere—motor, sensory or psychic—or generalized. Abortive attacks or auras are common but true petit mal epilepsy with generalized 3 per second spike and wave patterns on electroencephalograms is unknown as a sequel to such an injury.

From the medico-legal standpoint, it is important to know what are the chances of a patient's having seizures one or two years after a head injury. Practically all investigators seem to agree that the highest incidence of post-traumatic seizures occurs in the first year. In the second year the incidence of seizures among persons who have had such injuries is approximately 5 per cent (range 1.5 to 9 per cent) and in each succeeding year to the fifth about 1 per cent. Owing to lack of data, the incidence after five years is difficult to determine, but it seems to be less than 5 per cent and may be as low as 1 per cent. May we not say, then, within reasonable medical probability, that if a patient has no neurological symptoms or deficit, has a normal electroencephalogram and has gone two years after injury without evidence of seizures, he will not have post-traumatic epilepsy?

But suppose the patient does have a convulsion or two a few minutes after his head injury. What are his chances of having no more? Baumm[1] said that 15 per cent of patients with post-traumatic epilepsy spontaneously ceased having attacks and 30 per cent had very slight episodes. In a recent five-year survey at Cushing Hospital of a series of patients who had post-traumatic epileptic seizures, 27 per cent were found to have had no further attacks of any kind and another 13 per cent only one seizure in five years or minor aura of an attack without loss of consciousness. Thus 40 per cent had no attacks that would interfere with their work or cause them bodily harm. Others had had no attacks for more than two years, and still others less than one attack a year.

There would then seem to be practically an even chance that the post-traumatic epileptic might be kept almost free of attacks by adequate medication, which should be borne in mind in evaluating the disability of a patient and assessing compensation or an award.

In medico-legal evaluation, the state of the patient should be clearly defined. While terms used in describing neurological deficits—impaired vision, deafness, weakness and the like—are usually understood, even by persons without medical training, such terms as headache, dizziness and mental impairment are often used in a different frame of reference in one case than in another. If such symptoms are present as manifestations of an anxiety state, the prognosis for relief is considerably different than if they are the result of severe intracranial damage: In the one case they will probably all disappear with time and the settlement of whatever litigation may be entailed, while in the other they will probably persist indefinitely. The term *epilepsy* itself should be defined, for even today the word conjures the most sinister physical, mental and social blights. It should be clearly pointed out that epilepsy is not by any means always a sequel of injury to the head, and that in fact if attacks have not occurred by the time a settlement is proposed—which nowadays is usually a year or two after an accident—they probably never will. Moreover, minor episodes of blackouts, particularly on change of position, are not epileptic but of vascular origin—and no medical witness should let himself be led into confusing the issue by suggesting or appearing to agree that these may be epileptic.

W. Scott Allen, vice-president of Liberty Mutual Insurance Company, remarked at the 1954 session of the Congress of Neurological Surgeons: "Because nowadays lawyers regard physicians as their friends, they no longer browbeat them nor attempt to refute their evidence. Their best plan appears to be to cast a slight doubt or suspicion on the testimony and it usually is done by suggesting that some other interpretation might be possible. From my own experience I recall a lawyer who asked, 'Now doctor, we know that you think this patient does not have post-traumatic epilepsy, but you have testified that he occasionally blacks out, and feels unsteady. In your experience, do epileptics have such spells?' A direct answer to this question would have to be 'Yes,' but as an expert witness one is privileged to qualify his statements, and even to avoid a direct reply that would be misleading to the jury. So the witness' reply was not a direct answer but simply that blackouts are a common symptom of many diseases, including heart disease, cerebral arteriosclerosis, high blood pressure and many other conditions including epilepsy, and that consequently, the symptom *per se* had little diagnostic value."

For practical purposes no patient should be labeled a post-traumatic epileptic until he has had authentic convulsions. Dysrhythmia is not epilepsy and an electroencephalogram cannot be considered to give an absolute diagnosis of epilepsy. To call a patient epileptic on the basis of a few "blackouts" and an abnormal electroencephalogram is to do an injustice to the patient and to others with an interest in his state. In my opinion, the verified occurrence of seizure is a requisite to diagnosis of post-traumatic epilepsy. If there is a reasonable suspicion that attacks may have occurred and it is feared that recurrent epileptic attacks may develop, I believe that it would be fairer to both patient and compensating agency to award, not compensation for post-traumatic epilepsy, but an insurance policy against the possibility of the development of epileptic attacks within a reasonable time, say five or ten years. Then if seizures did develop, the patient would be compensated; if they did not, he would have no stigmatic label and the primary insuring agency would have suffered no inequity. Perhaps some commercial underwriter would devise such a policy if there were profitable demand for one.

Even if post-traumatic epilepsy does develop, it should be clearly understood that it does not have the same prognosis or implications as so-called idiopathic epilepsy. While I would not go so far as some investigators who have suggested that early seizures are of no real significance with regard to the later development of epileptic attacks, I believe that the occurrence of seizures soon after trauma is of good augury. In fact, if after a year or so a patient has only had one or two attacks, all within the first week or two of injury, I would question the advisability of using the label *post-traumatic epilepsy*, and would certainly hesitate to suggest that compensation should be awarded on that basis. Probably some kind of "epilepsy insurance," as previously mentioned, would be the most equitable means of handling such a case.

A final requisite is careful evaluation of the mental status of the patient, especially if he is over 50 years of age. Recovery of mental functions is certainly impaired in the older age groups, and this biological deterrent to a full recuperation should be recognized in assessing the disability of the patient, economically and socially.

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CASE REPORTS

Anaphylactic Death from Erythromycin

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It has become increasingly apparent that the use of antibiotic drugs may entail some danger to the patient. Many of the reactions noted are those that physicians had become accustomed to seeing in past years in connection with the treatment of disease with serums and antitoxins. A condition analogous to serum sickness after the use of various members of the antibiotic group has become very common and usually occurs from the sixth to the tenth day after the beginning of antibiotic therapy. Death from acute shock due to use of antibiotic agents also has occurred, clinically typical of anaphylaxis as observed in the past in serum or antitoxin therapy. It would seem wise to make such cases a matter of record, the better to evaluate the safety or danger of the various individual members of the antibiotic group. The case reported here was one of acute anaphylaxis due to erythromycin.

CASE REPORT

A two-year-old Negro girl came to the admitting room of the Communicable Disease Unit of the Los Angeles County General Hospital on 27 January, 1958, with complaint of anorexia and fever for two days and generalized diffuse exanthem over the entire body for one day.

In taking the history it was learned that one year previously the child had had an allergic urticarial rash after the administration of penicillin.

Upon physical examination, an erythematous papular rash over the body and face was noted. The rectal temperature was 100.6° F. Some circumoral pallor was present and the vessels of the pharynx were engorged. Cervical nodes were palpated on both sides. Leukocytes numbered 6,000 per cu. mm. of blood (the differential was not obtained). The urine was clear. A diagnosis of scarlet fever was made (although in retrospect this seems highly improbable in view of the leukocyte count). Because of the pharyngeal redness and the bilateral cervical node enlargement, a dose of 500 mg. of erythromycin was given and it was intended to send the patient home. However, five or ten minutes later, while the child was getting dressed to leave, she was seized with a generalized convulsion, for which 0.12 gm. of phenobarbital was given intramuscularly at once, even though she already was apneic and pulseless. Then 1 cc. of 1:1,000 epinephrine was given into the heart and a slowing of the heartbeat resulted. Oxygen was administered by positive pressure immediately. Spinal fluid aspirated at this time was clear. Tracheotomy was performed to facilitate breathing but before it was completed the patient died, less than twenty minutes after the injection of erythromycin.

Complete autopsy was carried out. The brain was removed and sent to the Ramon E. Cajal Laboratory for examination, a procedure customary in this hospital. The anatomical observations were as follows: Atrophy of the adrenal glands, hypertrophy and hyperplasia of lymphoid tissue throughout the body, hemorrhage into the right lung, bronchopneumonia of both lungs, subacute bronchitis, extramedullary hematopoiesis of the liver, high tracheotomy, exanthem of unknown cause.

There was no growth on cultures from the lungs or the blood, but a culture of material from the spleen showed *K. aerobacter*, and one from the larynx produced the same *K. aerobacter*, *Staphylococcus aureus*, coagulase-positive, and a nonhemolytic streptococcus. Microscopic examination of tissues removed from the various organs was consistent with the macroscopic conditions already described.

The Cajal Laboratory reported meningocerebral congestion. Microscopically observed were: Acute changes in nerve cells (nonspecific), meningocerebral congestion and ependymal granulation of the floor of the fourth ventricle. No focal softening or perivascular inflammatory cells were found in the central nervous system.

DISCUSSION

The sequence of cause and effect seem obvious in this case, and erythromycin must be added to the growing list of antibiotics for which sensitivity tests had better be applied before the drug is given hypodermically. This would appear to have been

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From the Communicable Disease Hospital, Los Angeles County General Hospital, Los Angeles 33.

Submitted April 22, 1958.

particularly indicated in this case owing to the history of sensitivity when penicillin was given one year previously.

SUMMARY

A child with apparently minor illness when examined on admittance to hospital was given 500 mg. of erythromycin intramuscularly because of laryngeal redness and enlargement of cervical nodes. Within a few minutes, generalized convulsion occurred, and 20 minutes after the antibiotic was given the patient was dead. At autopsy, conditions typical of anaphylactic shock were observed.

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Fibrocystic Disease of the Pancreas and Diabetes in an Adult with Unusual Pulmonary Manifestations

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Cystic fibrosis of the pancreas is predominantly a disease of infancy. Although the cause is still unknown, much progress has been made toward a better understanding of the disease since the first complete description in this country by Anderson[1] in 1938. Several years later, when the widespread involvement of all the mucus-producing exocrine glands in the disease was described, the term *mucoviscidosis* was suggested because of the thickening of the mucus which occurs. More recently di Sant 'Agnese[5] pointed out that both names are improper because the pancreas is usually but not always involved and the disease is not confined to the mucus-producing exocrine glands. In the light of present knowledge, he suggested the term generalized *exocrinopathy* as being more accurate from a descriptive point of view.

In the American and English literature there are few references to cystic fibrosis of the pancreas in adults. In 1955 di Sant 'Agnese[5] reported his findings in 325 patients he observed over a 15-year period in Babies Hospital, Columbia University. The oldest patient in the series was 19 years of age. In 1946, Hellerstein[8] reported a case in a 35-year-old Negro male who died 12 hours after admission to a hospital with Friedlander's pneumonia; there was no antecedent history and the diagnosis of cystic fibrosis of the pancreas was based upon the incidental observation at necropsy of numerous cysts and diffuse fibrosis in the pancreas. Hellerstein[9] recently called attention to the fact that many cases of cystic fibrosis of the pancreas in adults were reported in the German literature and cited a reference to the adult cases in *The System of Pathology* by Henke-Lubaesch. In 1954 Baxter[2] reported experience with the disease at Ohio State University and stated that before antibiotics the life span of patients was measured in months or a very few years, perhaps only one or two. He indicated that with proper management some patients may live until they are 18 to 22 years of age. This obvious disparity in survival ages reported by previous German and present-day observers leads one to wonder whether the German adult cases reported might not be attributable to cystic fibrosis following pancreatitis.

Di Sant 'Agnese[5] has proposed the following four criteria for present-day clinical diagnosis of cystic fibrosis of the pancreas:

1. Pancreatic deficiency.
2. Pulmonary pathologic changes
3. Excess chlorides in sweat.
4. Family history (assists only).

These criteria are based on his observations that there is complete absence of pancreatic exocrine function in 90 per cent of the patients; pulmonary pathologic change occurs in all patients at some time in the disease; and finally, abnormal sweat with increased chloride and/or sodium content occurs in 99 per cent of patients. Absence of the disease in siblings does not rule out the disease in the patient.

In reviewing the literature, we were unable to find a single reference to cystic fibrosis of the pancreas and associated or co-existing disease since 1938. In 1950 Molnar[11] reviewed the literature up to that time in a case report and made no reference to associated diabetes.

In 1955 di Sant 'Agnese[6] presented an excellent and comprehensive review of the pulmonary manifestations of fibrocystic disease of the pancreas, one of the unusual aspects of the case herein presented. He said that respiratory involvement has a variable onset from the age of a few weeks to several years, occurring between six months and two years of age in the great majority of cases. It must be recognized, he pointed out, that this is in reality a generalized disease of which the pancreatic and pulmonary lesions are only one expression. The 292 patients reported upon had, at some time during their illness, pulmonary disease of variable degree —severe in most instances and accounting for 90 per cent of the deaths. He made the observation that if patients reached late childhood without irreversible damage being done to their lungs, they seemed to improve and the degree of clearing in the roentgen picture was surprising. With regard to prognosis in this group, he suspected that at least many would go on to chronic pulmonary disease as adults. The oldest in the reported group was 18 years of age.

The following unusual case of cystic fibrosis of the pancreas is presented because the patient is an adult who has associated diabetes and the pulmon-

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From the Department of Pulmonary Diseases, Santa Barbara General Hospital, Santa Barbara.

Submitted April 21, 1958.

ary disease has not followed the usual course described in the literature.

CASE REPORT

The patient, a 24-year-old white woman, was admitted to the hospital on October 13, 1947, because of persistent and severe chronic bilateral lung disease characterized by a chronic productive cough and roentgenographic evidence of extensive pathologic change in both lungs which was refractory to antibiotic therapy.

The patient's mother said that the patient had begun to have a nonproductive cough when about six months of age. The cough was worse at night and it often seemed as though her chest were filled with phlegm. She did not receive formal medical care in childhood and she was not examined by a physician until she was 17 years of age.

When she was approximately a year old, it was first noticed that her abdomen was distended, and this condition persisted from then on. Although her appetite was good in early childhood, she was decidedly underweight and seemed to have difficulty in assimilating food. It was also reported that her stools, which were frequently loose, had a bad odor. The patient had had measles, chicken pox, and mumps before she began going to school. These diseases were apparently uncomplicated and did not aggravate the cough.

She attended primary school without significant disability. In high school her weight increased to 117 pounds, she participated in sports (volley ball and basketball) and led a normal social life. Because of the abdominal distention the patient thought she was overweight and attempted to reduce by dieting. During this period, she recalled, she perspired excessively and was often "drenched with sweat" following mild physical activity such as dancing.

She consulted a physician for the first time in her life in October of 1949, at age 17, because of an upper respiratory tract infection, which responded to antibiotics. The result of a tuberculin test at this time was negative. An x-ray film of the chest showed a slight increase in the bronchovascular markings in the right second anterior interspace, which was regarded as of no clinical significance. A film taken three months later (Figure 1) was unchanged.

Following graduation from high school the patient was employed as a telephone operator. At age 20 she was married. Six months later she consulted a physician because of loss of weight, polydipsia and drowsiness. A diagnosis of diabetes mellitus was made, and an appropriate diet and the use of 55 units of insulin daily were prescribed. An x-ray film of the chest, taken on May 17, 1954, because the cough had become productive, showed scattered bilateral mottled infiltrates which resembled the lesions of tuberculosis. The results of a tuberculin test and of guinea pig inoculation of sputum were negative. Later a "fungus" was said to have been cultured from a specimen of sputum. Penicillin and terramycin (di-oxytetracycline) were given over a period of several weeks with no change in the symptoms referrable to the respiratory tract. An x-ray film of the chest taken April 13, 1955 (Figure 2) was unchanged when compared with the film taken in 1954, but showed extensive changes when compared with the film taken in 1950 (Figure 1).

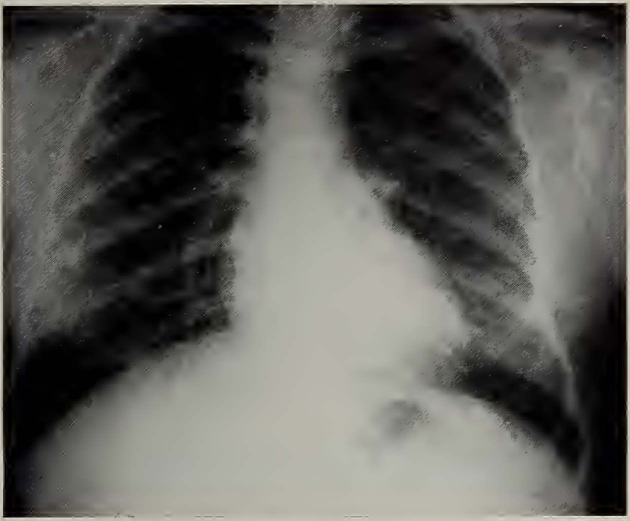

Figure 1.—X-ray film of chest taken January 10, 1950, when patient was 17 years of age. Interpreted as showing a slight increase in the bronchovascular markings, most prominent in the right second anterior interspace.

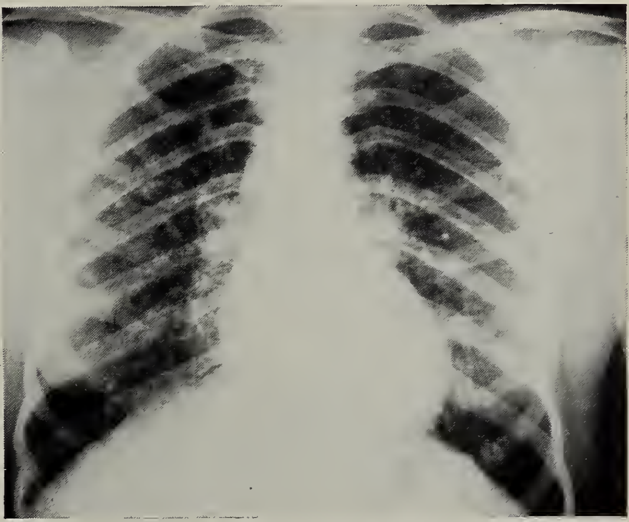

Figure 2.—X-ray film of chest taken April 13, 1955, showing the extensive roentgenographic changes since 1950. Patient 21 years of age at this time. This film is identical with one taken May 17, 1954. Note the prominent hilar shadows and the mottled "snowflake" infiltrates resembling tuberculosis. The result of a tuberculin test was negative.

On July 6, 1956, symptoms and signs of an intestinal obstruction developed. The abdomen was decidedly distended and felt doughy to palpation. A plain film of the abdomen was interpreted as showing possible obstruction in the mid small bowel and exploratory laparotomy was done. The surgeon stated that the proximal three feet of jejunum was reddened, dilated and filled with a gummy, puttylike material which was also present in the large bowel. He found no band, tumor or other mechanical cause for the obstruction other than the existence of the above described material. The pancreas felt firm and contained no masses. Pancreatic biopsy was not attempted because of the patient's condition, although a diagnosis of suspected pancreatic insufficiency was made. Entozyme® was prescribed for the patient following her discharge from the hospital. She gained weight and got along fairly well although the cough became more severe, production of sputum increased and diabetes became difficult to control during the ensuing months.

In April of 1957 the patient, then 24 years of age, consulted one of the authors, who regulated the diabetes and obtained a pure culture of *Candida albicans* from the sputum. Nystatin was given for three months and there was some subjective improvement. Because roentgenographic conditions in the chest were unchanged after this interval, the patient was admitted to the Santa Barbara General Hospital on October 13, 1957, for further study. On admission she was expectorating daily several ounces of odorless mucopurulent sputum which occasionally was blood tinged. The chief complaint on admission was excessive fatigue. She had no subjective complaints referrable to the gastrointestinal tract which she considered significant. For a number of years her bowels had moved an average of four times daily. She had never been pregnant and had not menstruated since March of 1956. Two brothers, aged 27 and 25, were living and well with no history of poor health. There were no other siblings.

Upon physical examination the patient was observed to be emaciated, the body weight was 84 pounds. She was coughing and appeared to be chronically ill. Extensive, bilateral, crepitant, moist rales, made worse by coughing, were noted. There was no cyanosis or clubbing of the extremities. A soft mitral systolic murmur was heard. The blood pressure was 100/80 mm. of mercury. The abdomen was tympanitic but was not tender and no masses or organs were palpable.

Results of first and second strength purified protein derivative tests were negative for tuberculosis. Leukocytes numbered 13,700 per cu. mm. of blood. A culture of sputum produced *Pseudomonas aeruginosa* and a coagulase-positive *Micrococcus pyrogenes*. Subsequent cultures grew both *Candida albicans* and pseudomonas, which persisted. Staphylococci did not reappear. An x-ray film of the chest taken September 25, 1957 (Figure 3) showed an increase in the extensive "snowflake" infiltrative shadows in both lung fields since 1955. The sedimentation rate (Wintrobe) was 46 mm. in one hour. The urine showed a 4-plus reaction for glycosuria. Fasting blood sugar content was 123 mg. per 100 cc., and two hours postprandial was 228 mg. per 100 cc. Pulmonary ventilatory function determinations were as follows:

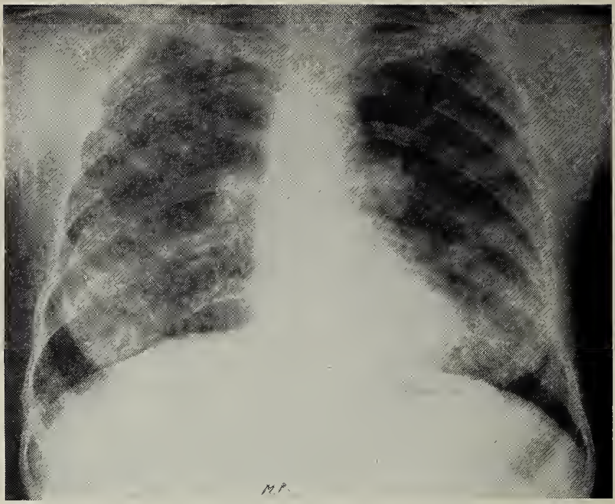

Figure 3.—X-ray film of chest taken September 25, 1957, showing extension and accentuation of the infiltrative shadows in both lung fields as compared with April 13, 1955.

Maximum breathing capacity—39.67 liters (48 per cent of predicted normal).

Vital capacity (3 seconds)—1,345 cc. (45 per cent of predicted normal).

Following sputum bacterial sensitivity studies the patient was placed on a regimen of nystatin, 4,000,000 units daily, in four divided doses, and dihydrostreptomycin, 1 gm. daily. In addition she was given 75 units of NPH insulin daily (which she had been taking for several months), a 2,500 calorie diet and calcium iodide (Calcidin) 1.2 gm. four times daily. On October 15, 1957, intermittent positive pressure breathing therapy, three times daily, was begun and an aerosol of 1 per cent phenylephrine and Tergemist.*

On October 24 a fresh stool specimen showed a moderate increase in fatty acid crystals and neutral fat. On October 25 a fecal examination was negative for trypsin activity in all dilutions. On the same day a plain film of the abdomen showed the colon to be distended with fecal material. This was interpreted as corroborative evidence of inadequate digestion of fat. On October 28 duodenal contents were aspirated through a Cantor tube and found to be negative for trypsin activity. With the tube in place, 10 cc. of iodine suspension (Dionosil) was instilled. The following day urine dilutions were negative for iodine, indicating a reduction in fat absorption.[14]

On November 1 a qualitative sweat chloride test[13] was found to be strongly positive. On November 18, 1957, the patient wore a pair of loose fitting, clean, dry rubber gloves overnight, and the sweat collected was analyzed for chloride by the standard serum method of Schales and Schales.[12] A determination of 90 mEq. per liter was made. A sweat sodium determination by flame photometry[4] was 65 mEq. per liter. Di Sant 'Agnese[7] in 1955 reported a range of from 4 to 60 mEq. (mean 32) for sweat chlorides and from 10 to 90 mEq. (mean 59) for sweat sodium in a large series of control studies.

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*An aqueous solution of the detergent, sodium 2-ethylhexyl sulfate, 0.125 per cent with potassium iodide 0.1 per cent.

On November 2 the patient was placed on a regimen of 60 gm. of triple strength pancreatin and 12,500 units of aqueous vitamin A daily. The administration of dihydrostreptomycin and of the other drugs already mentioned was continued and in addition tetracycline phosphate, 250 mg. every four hours night and day, was given.

From this point on the patient improved considerably. By December 12 the body weight had increased 14 pounds and on February 16, 1958, it was 105 pounds. Abdominal distention was decreased. Appetite and food intake had lessened. Stools were much smaller in quantity and bowel movements were reduced from four times to twice daily. The patient was expectorating less than one-half ounce of sputum daily, and the material varied from mucoid to mucopurulent. Pseudomonas remained as the one demonstrable pathogen on sputum culture. The cough became scarcely noticeable. The patient felt "fine" and said that her feeling of fatigue had disappeared. She walked outside the hospital daily. The first follow-up x-ray film of the chest after admission was taken on October 21, 1957 (Figure 4) and was interpreted as showing definite, although minor, improvement in the appearance of the lung fields. The most recent film, taken February 21, 1958, was unchanged.

Other follow-up studies showed improvement. Results of ventilatory pulmonary function studies on February 18, 1958, were: Maximum breathing capacity, 66.45 liters; vital capacity (3 seconds), 1,785 cc. The sedimentation rate (Wintrobe) was 21 mm. in one hour. Leukocytosis has persisted, the number of cells ranging from 13,000 to 14,000 per cu. mm. Results of other studies, which included liver function tests and determinations of blood chlorides, carbon dioxide and nonprotein nitrogen, were within normal limits, as were an electrocardiogram and venous pressure and circulation time determinations.

Because the quantitative sweat sodium and chloride determinations performed on November 18, 1957, were somewhat equivocal, sweat was collected by a different method on February 24, 1958. A two-foot square piece of plastic material was thoroughly cleansed and dried and placed directly on the skin of the patient's abdomen, which had been washed with distilled water and dried thoroughly. Sweating of the abdomen was produced by covering the plastic material with a blanket and a hot water bottle. A specimen of sweat was then collected and analyzed for chloride and sodium by the methods referred to above.[4,7] The following determinations were then made: Chloride, 192 mEq. per liter; sodium, 166 mEq. per liter. On February 25, 1958, the identical procedure was repeated and the following determinations were made: Chloride, 205 mEq. per liter; sodium, 190 mEq. per liter.

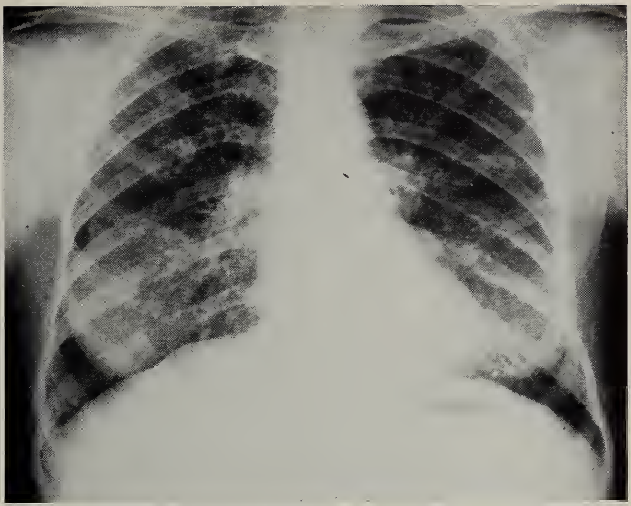

Figure 4.—X-ray film of chest taken October 21, 1957, after two weeks of intermittent positive pressure breathing therapy three times daily, along with antibiotics. This film was interpreted as showing improvement. There was no change from then to the most recent film taken February 21, 1958.

COMMENT

The present-day criteria for diagnosis in cystic fibrosis of the pancreas were met in the case herein presented. Although the patient reached the age of 17 before she received any medical care, which explains the delay in diagnosis, the history from birth through childhood is typical of cystic fibrosis of the pancreas. However, the fact that she reached the age of 24, whether treated or untreated, is most unusual in itself. Apparently in no case reported in the literature did a patient with a diagnosis based on present-day standards reach the age of 24 years.

A second unusual aspect of this case is that in addition to cystic fibrosis of the pancreas the patient had severe diabetes mellitus. These conditions have not, apparently, been previously described together. Di Sant 'Agnese,[5] in describing the microscopic lesions in the pancreas, emphasized that the islands of Langerhans are intact and sugar metabolism is unaltered; he cited this as an example of the coexistence in the same location of two tissues with different functions. Since this patient has apparently lived longer with her disease than any other patient reported in the literature, one is tempted to postulate a common etiology in the two diseases. In the same article cited above, di Sant 'Agnese[5] stated that an important pathological feature of the pancreatic lesion is its progressive nature. Initial lesions are present at birth and become progressively worse over periods ranging from a few months to two or three years. Further studies may provide the answer to this question.

The pulmonary disease in the present case was unusual in that there was no significant roentgenographic evidence of disease on a film taken in 1950, when the patient was 17 years of age. Four years later there were extensive roentgenographic changes and she was disabled because of this respiratory complication. Although this cannot be documented, it seems probable that the patient did not have abnormal roentgenographic changes in childhood, for the history did not suggest such changes and the patient's mother insisted that her childhood diseases were uncomplicated. Also, it is generally conceded that if severe respiratory complications develop in children with this disease, the patients do not recover without intensive use of antibiotics and other therapy.

Since respiratory complications cause death in 90 per cent of these patients, and their fate is determined by the course of the pulmonary disease, it is important that not only pediatricians but all clinicians who treat pulmonary diseases should be familiar with fibrocystic disease and its pulmonary complications. It is probable that more and more of these patients will reach adult life. A simple qualitative screening test[13] for sweat chlorides has been described, and this should be performed in the case of any young adult with obscure chronic pulmonary disease.

The respiratory insufficiency noted in the present case is not unusual. West and co-workers[15] reported in 1954 that both ventilatory insufficiency and alveolar insufficiency may occur, the latter leading to arterial hypoxia and carbon dioxide retention. Bruck[3] analyzed the gas tension in arterial blood and alveolar air in seven patients with fibrocystic disease. He concluded that the primary respiratory disturbance is uneven distribution of ventilation in relation to perfusion. Additionally, he found that when obstruction is generalized, hypoventilation ensues and causes respiratory acidosis. These findings would seem to indicate that intermittent positive pressure breathing therapy is clearly indicated in these patients with severe pulmonary disease complicating fibrocystic disease of the pancreas.

Huang[10] in 1957 found a prevalence of intestinal types of Gram-negative bacilli (*Pseudomonas aeruginosa*, coliform and *B. proteus*) in the bronchial flora of 60 per cent of patients with fibrocystic disease.

Baxter[2] stated that as the respiratory factor becomes worse, infants and children are likely to develop a cor pulmonale, which in the early stages reacts favorably to digitalis therapy. Although there was no objective evidence of this complication in the present case, it must be considered as a probable eventuality should the patient survive the respiratory infection.

SUMMARY

A case of cystic fibrosis of the pancreas (mucoviscidosis) in a 24-year-old woman has been presented. The diagnosis was proven on the basis of present-day diagnostic standards. Apparently, the oldest patient with this disease previously reported in the literature was 19 years of age. In addition to cystic fibrosis, the patient has associated diabetes. These conditions have not, apparently, been previously described together, and their possible relationship has been discussed. Finally, roentgenographic and clinical evidence suggest that the patient's pulmonary disease did not manifest itself until she was 16 years of age. After that it became progressive and disabling. It is probable that this disease will become more common in young adults. Clinicians should consider cystic fibrosis of the pancreas as the primary disease in any young adult with obscure, chronic pulmonary disease.

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Pulmonary Collapse as a Complication of Bronchial Asthma in a Child

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ALTHOUGH MASSIVE pulmonary atelectasis following bronchial asthma is rare in childhood it occurs often enough to be kept in mind in order that preventive measures may be undertaken.

REPORT OF A CASE

A boy seven and a half years of age who had had asthma since age three was examined January 14 because of pain low in the left side of the chest and the development of scoliosis to the right.

The illness had begun January 9 with a cough and audible wheeze, for which his mother gave him several doses of Quadrinal,® a preparation containing ephedrine, phenobarbital, theophylline-calcium salicylate and potassium iodide, which had seemed to relieve his asthma in the past. Then, having run out of this drug, she gave him an antihistamine which had once been given to the patient for urticaria. She reasoned that, since she had been told his hives were on an "allergic basis" the antihistamine might also relieve the asthma. The patient became nauseated and the mother had difficulty in getting him to take liquids. It was on January 13 that right scoliosis and thoracic pain developed.

When examined on January 14, the patient had no pain in the chest and he did not look very ill. The color of the skin was good. The oral temperature was 98.8°F. and the pulse rate 140. Moderate dyspnea was noted. No audible wheeze was present. The patient did not cough during the examination. There was pronounced right scoliosis. Breath sounds were diminished over the lower left lobe and there was a shift of the mediastinum to the left. No wheezes or rales were heard on auscultation. The hemoglobin content was 15.3 gm. per 100 cc. of blood. Erythrocytes numbered 5 million per cu. mm. and leukocytes 10,400 per cu. mm.—59 per cent neutrophils (segmented 56 per cent and band forms 3 per cent), 25 per cent lymphocytes, 12 per cent monocytes, and 4 per cent eosinophils. Results of urinalysis were within normal limits.

X-ray films of the chest showed diffuse homogeneous pleural densities at the left bases. The left diaphragm was elevated, the mediastinal structures were retracted to the left and the costal interspaces narrowed. The findings were consistent with atelectasis of the left lower lobe and associated pleural reaction. Except for pleural densities, the left upper lung field was clear. The right lung showed only some increase in peribronchial markings at the right base.

A consultant who examined the patient concurred in the impression of left lower lobe atelectasis, most likely owing to plugging of the left main bronchus with inspissated mucus.

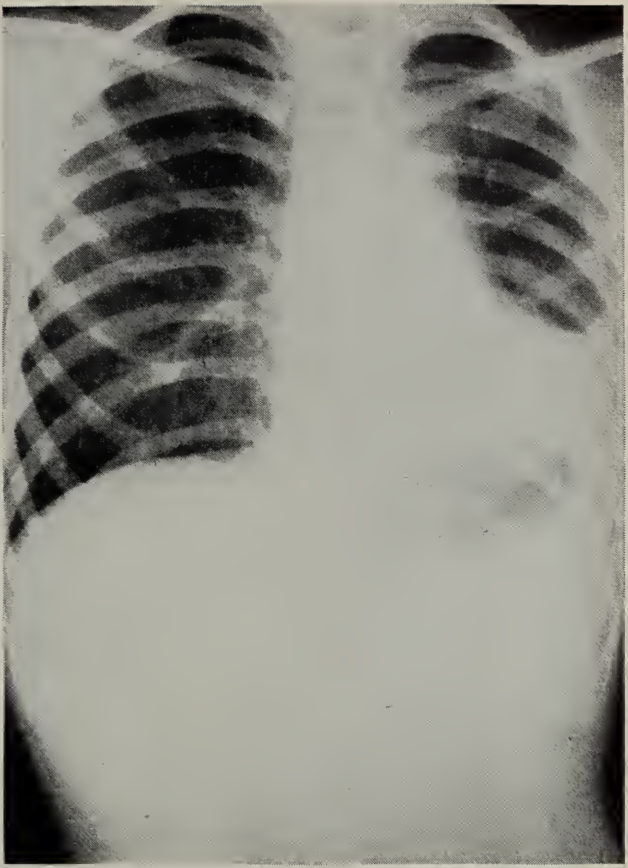

Figure 1.—Roentgenogram of chest on January 14, 1958, showing left lower lobe atelectasis, elevation of diaphragm and mediastinal shift.

Orthoxicol,® a preparation of dihydrocodeinone bitartrate, methoxyphenamine and sodium citrate, was given for expectorant and bronchial dilation effect, and daily inhalations of isoproterenol hydrochloride and oxygen were administered with an intermittent positive pressure breathing apparatus. V-Cillin K* was given, one 125 mg. tablet three times a day.

X-ray films on January 17 indicated persistence of the left lower lobe atelectasis but showed improved aeration and some regression of the pleural reaction.

Although the patient remained afebrile and quite comfortable, it was believed that bronchoscopic examination would have to be done unless there was pronounced improvement within 48 hours. By that time, however, stethoscopic examination indicated better aeration of the left lower lobe. On January 24 the patient was feeling better and was still afebrile. An x-ray film showed complete reexpansion of the left lower lobe with no evidence of atelectasis.

The patient was permitted full activity and returned to school January 27.

From the Department of Pediatrics, Rees-Stealy Medical Clinic, San Diego 1.

Submitted June 4, 1958.

*A penicillin preparation (Lilly) for oral administration.

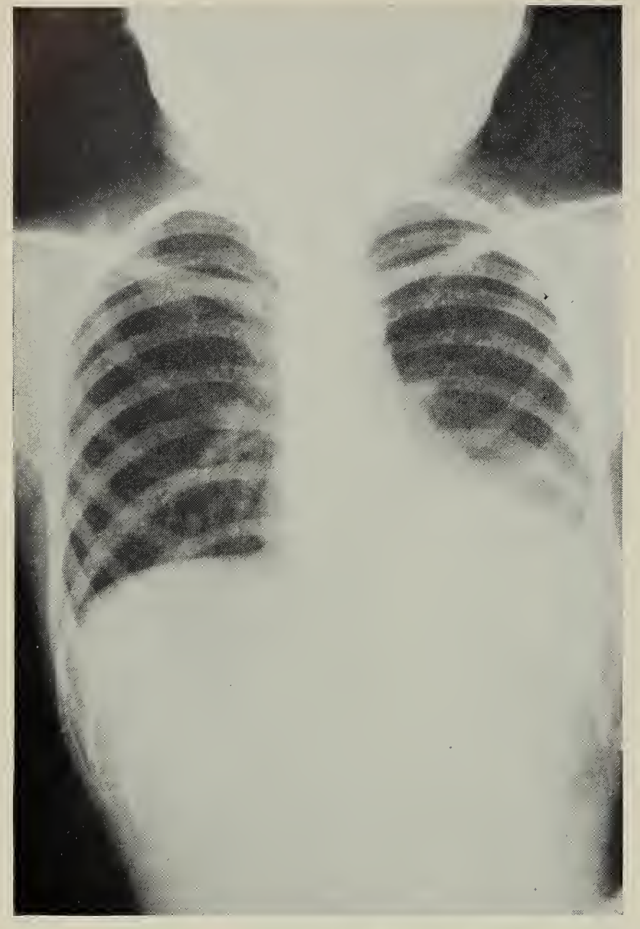

Figure 2.—Roentgenogram of chest on January 17, 1958, showing improved aeration in lower left lobe.

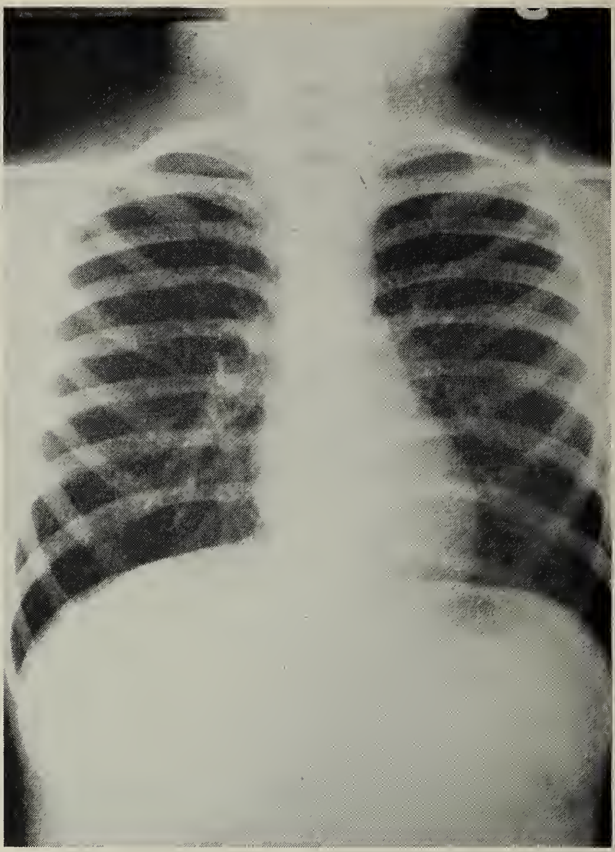

Figure 3.—Roentgenogram of chest on January 24, 1958, showing complete expansion of lower left lobe and normal position of diaphragm and mediastinum.

DISCUSSION

In a study of 854 children with pulmonary collapse James and co-workers[3] noted that 56 cases or 6.5 per cent were owing to bronchial asthma. Sixty per cent of the 56 patients were under five years of age. In 25 per cent of the cases the condition recurred.

According to Rakower and co-workers,[4] massive atelectasis is a rare complication of bronchial asthma and it occurs more frequently among children than adults because the smaller caliber of the bronchi in childhood predisposes to bronchial obstruction. These observers also noted that accompanying and following an attack of bronchial asthma there is edema of the bronchial mucosa with increase in bronchial mucus. At the same time there is a decrease in the ciliary action, thereby promoting stasis of secretions. Dehydration from loss of fluid during increased respiratory activity promotes drying of the mucus into inspissated plugs that obstruct the bronchi. Removal of these plugs is usually followed by prompt clinical improvement.

Glaser[1] said that the most common error in the treatment of status asthmaticus in childhood is failure to keep the patient well hydrated, which results in plugging of the smaller and sometimes larger divisions of the bronchi with mucus and may cause death from suffocation. He said that administration of adequate fluids, cold steam and expectorants and the avoidance of drying agents such as atropine and antihistamines are of paramount importance in the prevention of bronchial plugging.

Hinshaw and Garland[2] said that not only are antihistaminic drugs of very little value in the treatment of bronchial asthma but they have an atropine-like drying effect which, by making the mucus thicker and more tenacious, adds to respiratory difficulty. From the foregoing it can be summarized that treatment for the prevention of atelectasis due to mucus bronchial plugging in bronchial asthma should include adequate hydration, use of expectorants, bronchial dilation and caution in the use of antihistaminic drugs if they are used at all. In addition, the author also prescribes antibiotics, especially if fever is present.

In dealing with a sick child, it is usually difficult to maintain adequate fluid intake by mouth. An easy and effective substitute is retention enemas of one-half normal saline content, given in amounts of 120 to 240 cc. (in portions of 60 cc. every half hour) every 4 to 6 hours to make up the fluid deficit. This may obviate the need to put the patient in a hospital. The parents are instructed to note the color of the urine. If it is pale straw or lighter, hydration is adequate.

SUMMARY

A case of bronchial asthma in a boy seven and a half years old, complicated by a massive pulmonary atelectasis, is presented. The immediate cause was thought to be plugging of a main bronchus with inspissated mucus, enhanced by dehydration and the injudicious use of an antihistaminic drug by the patient's mother.

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Spontaneous Pneumothorax Complicating Pulmonary Metastasis of Sarcoma

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SPONTANEOUS PNEUMOTHORAX is an unusual complication of pulmonary metastasis from sarcoma. Only 15 cases with this association have been reported previously. Sherman and Brant[6] reported six such cases and also a case of metastatic adenocarcinoma (primary site undetermined) in which spontaneous pneumothorax developed. In eight of the 16 cases there was metastasis to both lungs. Thirteen of the patients were male and three female. The age range was from 9 to 55 years, but only three patients were more than 23 years of age. The tumors from which pulmonary metastasis originated were as follows: Osteogenic sarcoma in five cases, Ewing's tumor in three, fibrosarcoma and leiomyosarcoma in two each, and adult Wilms' tumor, rhabdomyosarcoma, angiosarcoma and metastatic adenocarcinoma (primary undetermined) in one case each.[1,3,4,5,6,7]

Although Sherman and Brant[6] believed the case they observed of metastatic adenocarcinoma was the first to be reported in association with pneumothorax, Heimlich and Rubin[2] reported three cases in which spontaneous pneumothorax was a presenting feature of primary lung cancer. This association is relatively rare, however, and there seems to be a more particular tendency for sarcoma to produce pneumothorax.

In discussions of pathogenesis Thornton and Bigelow[7] and Lodmell and Capps[4] expressed belief that not all cases come about in the same way. In some cases pneumothorax results from necrosis of a subpleural nodule with formation of a bronchopleural fistula. In others it may arise from bronchiolar obstruction by tumor, which brings about alveolar ectasia and interstitial emphysema, which in turn (by the mechanism described by Macklin and Macklin) causes air to travel by way of perivascular connective tissue spaces toward the mediastinum or visceral pleura.

REPORT OF A CASE

A 15-year-old white girl had a high thigh amputation in June of 1951 for osteogenic sarcoma of the distal femur. About six months later malaise and fatigue developed and then a hacking cough. After two weeks, severe cough and dyspnea required hospital admission on January 25, 1952. A film of the chest taken with a portable x-ray machine showed bilateral pneumothorax with collapse of about 40 per cent of the right lung and 25 per cent of the left lung. Metastatic lesions in both lungs ranged from 0.5 to 3 cm. in diameter, and there was left pleural effusion. The patient was treated with oxygen, codeine and antibiotics and was somewhat relieved. A film of the chest on February 13 showed a massive left pleural effusion, but pneumothorax was no longer present. The condition of the patient deteriorated rapidly and she died on March 22. Autopsy was not done.

SUMMARY

A case of spontaneous bilateral pneumothorax complicating osteosarcoma with pulmonary metastasis is reported and the literature reviewed.

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Submitted June 6, 1958.

Extensive Scleral Perforation with Complete Recovery

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THE CASE OF A MAN who retained normal vision after healing of an extensive through-and-through laceration of the sclera of the left eye is here reported in detail because only cursory accounts of the management of such a case were found in the literature.

REPORT OF A CASE

A healthy man, a sheet metal worker 32 years of age, walked into the office, presented himself for treatment by the author and stated that in the course of his activities as a sheet metal worker, a screwdriver slid from a piece of metal upon which he was working and plunged into his left eye. Upon examination a linear, through-and-through laceration of the left globe was observed. It began 1 mm. within the corneal substance at four o'clock and extended for 2 cm. obliquely into the inferior fornix almost at the outer canthus. The anterior chamber was filled with blood. There was no perception of light. Visual acuity in the right eye was 20/20.

The patient was placed upon the operating table in the office surgery. The skin of the area of the left eye was gently cleansed with aqueous merthiolate. A tetanus sensitivity test was immediately begun. A nurse separated the lids with two Desmarres lid everters, one holding up the upper lid and the other gently pulling down on the lower lid. The lid everters rather than a speculum were used to avoid putting pressure on the eye. Vitreous oozed from the lips of the wound. The left globe appeared slightly smaller than the right. It appeared that the ciliary body was included in the area of laceration. One cubic centimeter of procaine 2 per cent and epinephrine was injected retrobulbarly. No other anesthetic agent was used. Three 6-0 black silk sutures were inserted into the scleral wound at suitable intervals to effect closure. Each suture was first put through the conjunctiva, well back from the lacerated edge. The needle was then brought to the edge of the scleral wound and was then nipped into, but not through, the substance of the sclera; that is, the needle was brought out through the thickness of the edge of the scleral wound, rather than through the internal scleral surface. Next it was similarly inserted into the opposite lip of the scleral wound and then brought out through the conjunctiva well back of the conjunctival laceration. Considerable conjunctiva was included in each suture so that the resultant conjunctival gathering would provide a padding and splint over the scleral wound.

After all three sutures were placed, each was tied with a square knot. To minimize irritation, the ends were cut as short as possible without making removal later too difficult.

Atropine ointment and chloramphenicol ointment were instilled into the conjunctival sac and a fairly thick, firm dressing was applied over the injured eye and a lighter dressing over the uninjured one. The previously mentioned test having shown no sensitivity to tetanus antitoxin, 1,500 units was administered.

The patient was conveyed in a wheelchair through an under-street tunnel into the California Hospital and there was immediately put to bed. Absolute bed rest in a supine position for 48 hours, with no bathroom privileges, was prescribed. Chloramphenicol was administered, 1 gm. intramuscularly once daily for three days, then one 250 mg. capsule by mouth four times a day. Codeine was given as needed for relief of pain.

After two days the dressings were removed from both the injured and the uninjured eye. After observation, the dressing on the left eye was replaced. The hospital progress notes indicate that there was complete recession of hyphemia. From the next day onward, the patient was permitted to walk to the bathroom once daily but except for that had to remain in bed. If further voiding was necessary, the bedpan was to be used. He was instructed to lie either supine or resting on the left side. The left-sided position was considered an inducement to a firm reattachment of the retina at the site of the wound. The head was somewhat elevated on pillows during this time, a measure also designed to promote retinal reattachment.

After eight days the use of chloramphenicol was discontinued. The fundus was reported as "fairly clear" at that time.

During the stay in the hospital the patient was afebrile. On one occasion, when a cathartic was needed, milk of magnesia and cascara were given.

Two weeks after operation the patient was discharged to his home with explicit instructions that he was to remain quietly in bed, do no reading and watch no television. These instructions were given to keep the movement of the eyes to a minimum lest retinal detachment occur.

Four days after returning home, the patient was transported to the office in an automobile. The laceration appeared to be healing satisfactorily. After another four days, when the stitches were removed, the wound appeared to be well closed.

The patient was finally permitted to return to work some three and a half months after the injury.

It is believed that complete bed rest with binocular dressing for 48 hours was an essential feature in the patient's excellent recovery. Considerable thought was given throughout the treatment to the possibility of retinal detachment.

A detailed examination six months after injury showed that the vision of each eye was 20/15 for distance and 14/14 for near. There was no evidence of conjunctival inflammation. A tiny pseudo pterygium was noted at the right corneal limbus at four o'clock—the site of the wound. The lens showed no evidence of cataractous infiltration.

Submitted June 10, 1958.

There were no opacities in the vitreous. A coloboma of the retina could be seen at the site of the wound. No evidence of sympathetic involvement was seen in the right eye.

When tested again more than a year later, the uncorrected distance vision of the left eye was 20/20-2 and the near 14/14-1, as compared to 20/20 plus 3 for distance and 14/14 for near in the case of the right eye. The patient complained of mild leftsided headache after reading. Stereoscopic examination showed normal simultaneous binocular vision as well as precise fusion and excellent depth perception. After ascertaining that the right eye was the dominant eye, muscle balance testing on the Stevens phorometer showed esophoria of 4 prism diopters for near. Close scrutiny of the left globe revealed a tiny scar at the corneal limbus at 4 o'clock and a faint line of pigment which extended from this scar into the lower fornix near the outer canthus.

Upon slit lamp and funduscopic examination of the left globe, no pathologic change was seen except the fairly well pigmented retinal coloboma at the site of the injury. There was no abnormality in the right globe. The refractive error was finally found to be as follows: *Right eye:* Plus .25S: 20/15-1 for distance, 14/14 for near. *Left eye:* Plus 1.00S combined with a plus .25C, ×170: 20/15-1 for distance and 14/14 for near.

The slightly increased degree of hyperopic error in the case of the left eye as compared to that of the right was assumed to be a consequence of a slight shrinking of the left globe following the original injury.

SUMMARY

A detailed report of an extensive through-and-through laceration of the sclera of the left globe is presented, with a description of the surgical repair and care of the patient afterward. Careful attention was given to measures to prevent retinal detachment. Function and vision returned to normal.

2814 North Eastern Avenue, Los Angeles 32.

REFERENCES

1. Callahan, Alston: Surgery of the Eye—Injuries, Charles C. Thomas, Publisher, Springfield, Illinois, 1950.

2. Duke-Elder, Sir Stewart: Textbook of Ophthalmology, Vol. VI, Injuries, Henry Kimpton, Publisher, London, 1954.

For Your Patients—

Health Insurance is GOOD *Medicine*

Historically, the California Medical Association, of which I am a member, was one of the nation's pioneers in the field of medical care insurance through its sponsorship of the California Physicians' Service. Blue Shield-CPS is a "service plan" as the name implies. It provides medical care rather than a specified sum of money which, in case of illness, you would collect from an insurance company's "indemnity plan."

The folder enclosed explains in considerable detail the various types of coverage. I think the information will be valuable to you and your family.

California Physicians' Service and insurance company programs guarantee your continued freedom of choice of doctor and hospital. It means that if you have this type of protection, our fine relationship, that of patient and personal physician, will not be interrupted as it would be if you became a "captive patient" in a panel practice type plan.

Sincerely,

____________________________, M.D.

MESSAGE NO. 5. Attractive, postcard-size leaflets, you to fill in signature. Available in any quantity, at no charge as another service to CMA members. Please order by Message Number from CMA, PR Department, 450 Sutter, San Francisco. (Message No. 5 is to be accompanied by CMA's folder "Health Insurance is **Good** Medicine." Folders will be included in your order.)

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 439th Meeting of the Council, San Francisco, St. Francis Hotel, August 16, 1958.

The meeting was called to order by Vice-Chairman Sherman in the Georgian Room of the St. Francis Hotel, San Francisco, on Saturday, August 16, 1958, at 9:30 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron, Editor Wilbur and Councilors MacLaggan, Wheeler, Todd, Foster, O'Connor, Shaw, Sherman, Bostick and Teall.

Absent for cause, Secretary Daniels and Councilors O'Neill, Kirchner, Pearman, Harrington, Davis and Lum.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Thomas, Clancy, Gillette and Whelan of C.M.A. staff; Robert Huber, legal counsel; county society executives Scheuber of Alameda-Contra Costa, Pettis of Los Angeles, Bannister of Orange, Marvin of Riverside, Donovan and Colvin of Santa Clara; Doctor Malcolm Merrill, state director of public health; Doctor Marshall Porter, state director of mental hygiene; Doctors A. E. Larsen and William Gardenier of California Physicians' Service; Doctor Carl Moore, president of Kern County Medical Society; and Doctors David A. Wood, Malcolm Watts, John Keye and Francis J. Cox.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 438th meeting of the Council, held July 12, 1958, were approved.

2. *Membership:*

(a) A report of membership as of August 14, 1958, was presented and ordered filed.

(It was pointed out that the addition of about 350 additional members by December 31, 1958, would entitle the C.M.A. to an additional delegate to the A.M.A.)

(b) On motion duly made and seconded, 66 members who had become delinquent through nonpayment of dues and had now met the dues obligation were voted reinstatement.

(c) On motion duly made and seconded in each instance, nine applicants were voted Associate Membership. These were: Walter D. Hawk, J. G. McCormack, Alameda-Contra Costa County; Jean Pouteau, Marin County; Glen W. Miller, Mendocino-Lake County; Frederick A. Obrock, Riverside County; John A. Mitchell, Sacramento County; Francis J. Rigney, San Francisco County; Jan Kelson, David R. Talbot, Ventura County.

(d) On motion duly made and seconded, Doctor Eugene Hall of the Inyo-Mono County Medical Society was voted Retired Membership.

(e) On motion duly made and seconded, a reduction of dues was voted for two members for a period of postgraduate study.

3. *Financial:*

(a) A report of bank and other balances as of August 14, 1958, was presented and ordered filed.

(b) A request was presented for a contribution

FRANCIS E. WEST, M.D. . . . . President
T. ERIC REYNOLDS, M.D. . . . . President-Elect
JAMES C. DOYLE, M.D. . . . . Speaker
J. NORMAN O'NEILL, M.D. . . . . . . Vice-Speaker
DONALD D. LUM, M.D. . . . . Council Chairman
ALBERT C. DANIELS, M.D. . . . . Secretary-Treasurer
IVAN C. HERON, M.D. . Chairman, Executive Committee
DWIGHT L. WILBUR, M.D. . . . . Editor
JOHN HUNTON . . . . Executive Secretary
General Office, 450 Sutter Street, San Francisco 8

ED CLANCY . . . . Director of Public Relations
Southern California Office:
2975 Wilshire Boulevard, Los Angeles 5 • DUnkirk 5-2341

to a campaign fund relative to one of the public propositions on the next general election ballot and, on motion duly made and seconded, it was voted not to contribute to this fund but, in accordance with usual policy, to suggest that physicians form independent committees on this proposition.

4. *Cancer Commission:*

Doctor David A. Wood, chairman of the Cancer Commission, gave a progress report, including a report of the medical director of the commission. He stated, among other things, that four regional meetings have been planned for the coming year between representatives of the Cancer Commission and the officers and cancer committee members of the county societies. He also reported that the Cancer Commission would revise and reissue its pamphlet on "Unconventional Cancer Treatments."

5. *State Department of Public Health:*

Doctor Malcolm Merrill, State Director of Public Health, reported that a diagnostic testing machine which has been prepared for sale in San Diego County was under investigation by his department and that the State Board of Health would review the investigative material at its next meeting, with a view toward determining whether or not the machine constituted a threat to the public health.

He also reported that the incidence of both encephalitis and poliomyelitis was quite low at this time. Doctor Merrill also reported that Doctor Marcia Hayes, director of the Children's Bureau of his department, is currently confined to a respirator from a still-undiagnosed affliction. On motion duly made and seconded, it was voted to communicate to Doctor Hayes the best wishes of the Council for her return to good health.

6. *Public Relations:*

Doctor Malcolm Watts, chairman of the Committee on Public Relations, reported that the committee had met to consider the resolutions from the 1958 House of Delegates which had been referred to it by the Council. He reported the following actions:

Resolution No. 23, referred to the Council and by it to the Committee on Public Relations, including seven "resolved" sections—The committee voted to refer back to the Council the first three "Resolved" sections as calling for policy decisions. The fourth "Resolved," relative to opinion surveys, will be covered in items in *Newsletter* asking for opinions and suggestions from members. The fifth "Resolved" was considered by the committee to be the province of the District Councilors who could report to their constituents on such subjects from Council meetings as they considered of interest. The sixth "Resolved" was felt to be already being met in reporting Council activities in CALIFORNIA MEDICINE and a digest in *Newsletter.*

Resolution No. 28, relating to the basic rights of Americans—The committee felt that the intent of this resolution was already accepted as a part of C.M.A. policy and no further action was needed.

Resolution No. 32, relating to health insurance—The committee will invited the author of the resolution to meet with it to discuss his objectives.

Resolution No. 35, relative to public availability of emergency services—The committee felt the availability of advertising funds contributed by the C.M.A. to the county societies would make possible the carrying out of this proposal.

Resolution No. 58, relative to socialism—The committee felt the objectives of this resolution were already a part of C.M.A. policy and no action was needed at this time.

On motion duly made and seconded, it was voted to refer to the Constitution Committee, which is to be reactivated, the first three "Resolveds" of Resolution No. 2.

On motion duly made and seconded, it was voted to approve the solicitation through *Newsletter* of suggestions for better communications.

On motion duly made and seconded, it was voted that Council meeting minutes be prepared to include parenthetical explanations of the background of individual items and that Councilors be given an opportunity to append their individual reports and comments to copies of such minutes to be sent to officials in their own districts.

Doctor Watts also reported that his committee has suggested that a new plaque be prepared by the A.M.A. on the "Fifth Freedom" of free choice of physician. He also reported that his committee did not advise sending a letter to county medical societies relative to the cost of drugs under the public welfare medical care program.

Doctor Watts then discussed a philosophy of medical public relations, based primarily upon medicine's identifying itself with the interests of the individual, as a means of educating the public on the advantages of the private practice of medicine.

On motion duly made and seconded, it was voted to accept the committee report and provide for its distribution to appropriate officers and members.

7. *California Medical Association Standards:*

President-Elect Reynolds called attention to the fact that he and President West would soon start their official visits with county societies. He suggested a Council meeting to be devoted to the determination of standards and policies on important topics of the day, so that these officials may be assured they are voicing official opinions in their meetings with county groups.

8. *Commission and Committee Appointments:*

Councilor Bostick, chairman of the Committee on Nominations, made the following nominations for committee and commission appointments, all of which, on motion duly made and seconded, were approved:

Doctor Herbert C. Moffitt, Jr., as chairman of the Committee on the Private Practice of Medicine in Medical Schools.

Doctors Dewey Powell and Dorothy Allen as members of the Committee on History and Obituaries; accept with regret the resignation of Doctor J. Roy Jones as a member of this committee.

Doctor Howell Wiggins of San Diego as a member of the Committee on Blood Banks, vice Doctor Thomas F. O'Connell, Jr., resigned. (Subject to approval of committee; he has approved.)

Doctor Knox Finley as a member of the Committee on Mental Health, vice Mathew Ross, resigned.

Committee on Adoptions, a new committee—George Herzog, Jr., San Francisco, chairman; William W. Belford, San Diego; John Ewer, Oakland; Joseph Telford, San Diego; Roberta Fenlon, San Francisco; John Walsh, Sacramento; Dan O. Kilroy, Sacramento; Henry Tieche, Fresno; Ira H. Degenhardt, San Rafael; Russell W. Mapes, Beverly Hills; additional names to be submitted later.

9. *California Medicine:*

Editor Wilbur reported that Doctor William A. Kiskadden had found it necessary to resign as a member of the Editorial Board of CALIFORNIA MEDICINE for plastic surgery; he recommended that Doctor George Webster of Pasadena be appointed to succeed him and, on motion duly made and seconded, it was voted to approve this appointment.

10. *Medicare:*

Mr. Thomas reported that a new schedule of allowances for Medicare cases had been prepared following discussions with Department of the Army officials administering this program and that approval was needed to authorize signing of an amendment to the present contract to make these allowances official. He also reported that new regulations had been drafted, to become effective October 1, 1958, and that Army officials were expected to issue such regulations in the near future. Following discussion, it was regularly moved, seconded and voted to approve the substitution of the new schedule of allowances for the present schedule.

11. *Public Welfare Medical Care Program:*

Doctor West presiding; Doctor Sherman reported that the Liaison Committee to the State Department of Social Welfare did not believe a statewide letter relative to drug costs was advisable at this time.

Doctor Sherman also reported that following a meeting with the Board of Social Welfare his committee felt that prior authorization for treatment under the public welfare program would be dropped entirely but that an orderly procedure for doing this must be established. He suggested lists of counties in the northern and southern areas where discontinuance of prior authorization might first be expected, with other counties to follow.

Doctor Sherman also suggested that a study be made of the cost of hospitalization insurance for aged indigents, using one county as a pilot area. On motion duly made and seconded, it was voted to refer this proposal to the Commission on Medical Services.

12. *Committee on School Health:*

Doctor MacLaggan presented a request received from the California Teachers Association, asking that a joint liaison committee be established for the purpose of discussing school health matters of mutual concern. On motion duly made and seconded, it was voted to approve this proposal, Doctor MacLaggan as Chairman of the Division of Community Health Services of the Commission on Public Health and Public Agencies to appoint the committee.

13. *Medical Review and Advisory Board:*

Mr. Whelan made inquiry as to the advisability of printing additional copies of the Patient Attitude Test, in order to fill several orders received since the original printing was exhausted. On motion duly made and seconded, it was voted to print an additional supply.

14. *State Department of Mental Hygiene:*

Doctor Marshall Porter, State Director of Mental Hygiene, reported that in the 1958 fiscal year, state hospitals had shown a census decrease from the preceding year. This contrasted with the increasing rate in former years, when a new hospital was required about every two years to handle the case load. Doctor Porter attributed the reduced census to improved care and consequent earlier release of patients.

Doctor Porter also reported that a fund of $333,000 was now available for training state hospital physicians in psychiatry. This program is expected to provide better care for patients and to reduce turnover of professional personnel.

15. *Judicial Commission:*

Councilor Wheeler brought before the Council an inquiry arising from a county society in his district, asking official policy in the handling of disciplinary actions brought by societies following hearings by review committees of fee complaints brought by third parties. On motion duly made and seconded, it was voted that the Council notify the officers and appropriate committees of county medical societies of the passage of Resolution No. 9 by the 1958 House of Delegates and request the societies be guided by this resolution.

16. *Woman's Auxiliary:*

On motion duly made and seconded, it was voted to ask the administrative office to cooperate with the Woman's Auxiliary on plans for the reception to be held during the 1959 Annual Session.

17. *Conference of County Society Officers:*

On motion duly made and seconded, it was voted to hold the annual Conference of County Society Officers on the day preceding the January, 1959, meeting of the Council, in Los Angeles.

18. *Time and Place of Next Council Meeting:*

On motion duly made and seconded, it was voted to hold the next meeting of the Council in San Diego on September 13, 1958.

19. *California Physicians' Service:*

Doctor Heron reported that the conversion of individual contracts in C.P.S., to provide a measure of co-insurance on hospitalization, was proceeding smoothly. He also reported that fee schedules were being sent to physicians in Los Angeles and Orange Counties for use under a $7,200 income ceiling, some contracts on which are already in force.

20. *Essay Contest:*

On motion by Councilor Foster, duly seconded, it was voted to approve essay contests to be held in high and junior high schools on the subjects "The Advantages of the Private Practice of Medicine" and "The Advantages of the Free Enterprise System."

21. *Ad Hoc Committee on Research and Planning:*

Doctor West reviewed for the Council the determinations reached by the ad hoc committee on Research and Planning and asked the members of the Council to review the original report of this committee from its initial meeting so that later consideration could be given to it.

22. *Resolution of Appreciation:*

Councilor Shaw proposed that a resolution be adopted to commend Mr. Donald Douglas, President of Douglas Aircraft Co., for his company's progressive action in providing medical and hospital services for employees and their dependents through private enterprise channels. On motion duly made and seconded, it was voted to adopt such a resolution and to forward copies of it to Mr. Douglas.

23. *Commendation of Senator Knowland:*

On motion duly made and seconded, it was voted to forward to Hon. William F. Knowland, Senator from California, the official commendation of the Association for his prompt and effective action in supporting the Association's position on Medicare legislation in the Congress.

24. *November Council Meeting:*

It was announced that facilities would be available at Disneyland for the November Council meeting and it was voted to hold that meeting in Disneyland.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:15 p.m.

Samuel R. Sherman, M.D., *Vice-Chairman*
John Hunton, *Acting Secretary*

Wanted by the FBI

The Federal Bureau of Investigation requests the cooperation of the physicians in California in locating a fugitive sought in connection with irregularities in violation of the National Bankruptcy Act. The fugitive, Martin L. Manson, may be receiving medical care. The FBI has been informed that Manson told a business associate in July, 1952 that he had been treated in Oakland for a malignant tumor.

Manson was indicted by the Federal Grand Jury at Los Angeles on February 25, 1953, for violation of the National Bankruptcy Act.

Manson, who is known to have used numerous aliases, for many years operated a tailor shop in Santa Barbara under the firm name of "Martin's." He also established several small dry-cleaning shops and either abandoned or closed them after a few months, moving to new locations.

A physical description of Manson, according to the FBI, is as follows: Male, white, 69 years old, 5 feet 7½ inches tall, weight about 170 pounds, portly build, light blue eyes, mixed grey and brown hair, thin on top. He is proud, boastful and self-assertive. He is married and has a daughter and lists his occupation as tailor.

He has used the aliases Martin Luther Manson, Martin Leonard Manson, Bill Billinger, Martin Martinez, Rue Max Adams, Rue Leonard Adams, L. Martin, M. Leonard, Martin Leonard, Leo Leonard.

Any information concerning him should be given to the Federal Bureau of Investigation, 1340 West Sixth Street, Los Angeles, HUbbard 3-3551, or the nearest office of the FBI as listed on the first page of every telephone directory.

In Memoriam

Banks, William H. Died in Decoto, August 20, 1958, aged 84. Graduate of Cooper Medical College, San Francisco, 1904. Licensed in California in 1904. Dr. Banks was a retired member of the San Francisco Medical Society and the California Medical Association, and an associate member of the American Medical Association.

◆

Christensen, Walter. Died July 23, 1958, aged 79. Graduate of Minneapolis College of Physicians and Surgeons, Minnesota, 1904. Licensed in California in 1923. Dr. Christensen was a retired member of the Los Angeles County Medical Association; a life member of the California Medical Association, and an associate member of the American Medical Association.

◆

DeLappe, Guerne W. Died in Modesto, August 8, 1958, aged 36. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1945. Licensed in California in 1945. Dr. DeLappe was a member of the Stanislaus County Medical Society.

◆

Dolan, P. E. Died in Oakland, August 10, 1958, aged 70, of bronchogenic carcinoma. Graduate of Oakland College of Medicine and Surgery, 1914. Licensed in California in 1915. Dr. Dolan was a retired member of the Alameda-Contra Costa Medical Association and the California Medical Association, and an associate member of the American Medical Association.

◆

Everist, Guy V. Died in San Diego, September 3, 1958, aged 50. Graduate of St. Louis University of Medicine, Missouri, 1935. Licensed in California in 1953. Dr. Everist was a member of the San Diego County Medical Society.

◆

Jones, Donald. Died in Cleveland, Ohio, August 7, 1958, aged 48, of emboli following cardiac surgery. Graduate of Hahnemann Medical College and Hospital of Philadelphia, Pa., 1936. Licensed in California in 1937. Dr. Jones was a member of the Sacramento Society for Medical Improvement.

Lane, Stuart Frederic. Died in Oxnard, May 27, 1958, aged 61, of ruptured abdominal aneurysm and arteriosclerosis. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1927. Licensed in California in 1927. Dr. Lane was an associate member of the Ventura County Medical Society.

◆

Miller, Benjamin F. Died in Whittier, May 25, 1958, aged 83. Graduate of Rush Medical College, Chicago, Illinois, 1897. Licensed in California in 1911. Dr. Miller was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

◆

Osorio, Vasco M. Died in Piedmont, August 29, 1958, aged 71. Graduate of University of Louisville School of Medicine, Kentucky, 1916. Licensed in California in 1924. Dr. Osorio was a member of the Alameda-Contra Costa Medical Association.

◆

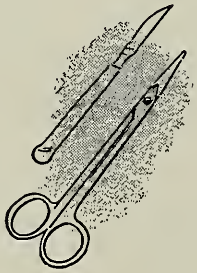
Potter, Marjory J. M. Died in La Mesa August 16, 1958, aged 87. Graduate of University of Buffalo School of Medicine, N. Y., 1897. Licensed in California in 1918. Dr. Potter was a retired member of the San Diego County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

◆

Rehbock, Donald Jacob. Died August 7, 1958, aged 54. Graduate of University of Pennsylvania School of Medicine, Philadelphia, 1930. Licensed in California in 1944. Dr. Rehbock was a member of the Los Angeles County Medical Association.

◆

Witter, Calvin B. Died August 9, 1958, aged 76. Graduate of Albany Medical College, New York, 1909. Licensed in California in 1922. Dr. Witter was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.



APPLICATION FOR HOUSING ACCOMMODATIONS

FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the **California Medical Association,** February 22 to 25, 1959, San Francisco, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. **All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.**

ALL RESERVATIONS MUST BE RECEIVED BEFORE: FEBRUARY 1, 1959

Note: **The House of Delegates will convene at the Sheraton-Palace Hotel; all Scientific Sessions and Exhibits will be at the Civic Auditorium.**

Eighty-eighth Annual Session

CALIFORNIA MEDICAL ASSOCIATION

San Francisco, California

FEBRUARY 22-25, 1959

HOTEL ROOM RATES *

	Single	Twin Beds	Suites
SHERATON-PALACE (HEADQUARTERS)			
Market at New Montgomery	8.50-16.00	12.50-20.00	20.00-100.00
FAIRMONT			
950 Mason	12.00-20.00	16.00-24.00	37.00- 66.00
MARK HOPKINS			
999 California	14.00-18.00	18.00-22.00	32.00- 60.00
ST. FRANCIS			
Powell at Geary	10.00-22.00	15.00-24.00	26.00- 75.00
SIR FRANCIS DRAKE			
450 Powell	10.00-14.00	15.00-20.00	32.00- 40.00

***The above quoted rates are existing rates but are subject to any change which may be made in the future.**

CALIFORNIA MEDICAL ASSOCIATION
450 Sutter Street—Room 2000
San Francisco 8, California

Please reserve the following accommodations for the 88th Annual Session of the California Medical Association, in San Francisco, February 22 to 25, 1959.

Single Room $.................... Twin Bedded Room $....................

Small Suite $.................... Large Suite $.................... Other Type of Room $....................

First Choice Hotel.................... Second Choice Hotel....................

ARRIVING AT HOTEL (date)....................Hour:..........A.M..........P.M. } Hotel reservations will be held until

Leaving (date)....................Hour:..........A.M..........P.M. } 6:00 P.M., unless otherwise notified

THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

....

....

....

....

Individual Requesting Reservations—Please print or type Delegate?.......... Alternate?..........

Name.................................... County....................................

Address.................................... City and State....................................

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

Proposals for current and long-range programs for rehabilitation of alcoholics are being readied by the State Health Department for consideration by the 1959 session of the Legislature.

The proposals, drawn by the Division of Alcoholic Rehabilitation following numerous meetings with its five-member advisory committee and discussion with interested agencies and organizations, are in three major fields: Treatment and rehabilitation services; study and investigation; education, information and training.

In the general field of treatment and rehabilitation the department is considering a proposed system of financial grants to communities for the development and support of approved community programs for the treatment and rehabilitation of alcoholics and for the control of alcoholism. Under this proposal, cities and counties would be eligible for State funds on a 50-50 shared basis.

Components of approved community services might include such activities as out-patient clinics, detoxication centers, rehabilitation programs in jails and jail farms, rehabilitation houses, and counseling and consultation services.

The department also is proposing that the present "pilot" alcoholism rehabilitation clinics which are currently supported by State funds be continued on the same basis for a period of five years in order to adequately test operational feasibility and to learn further of the value of out-patient services for alcoholics.

Further, the department is considering making available financial grants to California medical schools for the establishment of out-patient and inpatient services within these training centers for the treatment of alcoholics. Services within the medical schools would be primarily for teaching and training.

In order to extend alcoholism education, information and training, the department is proposing to find out specific training and education needs and to serve these needs through stimulation or sponsorship of training operations for special professional groups and for various regions and communities. In addition, the department proposes publication of pertinent literature and the provision of consultation to communities and community agencies on sound educational practices in alcoholism.

* * *

The California infant mortality rate has increased during the last two years after showing a steady decline from 75.0 deaths under one year of age per thousand births in 1920 to the low rate of 23.6 in 1955. The rate for 1956 was 24.0 and for 1957, 24.8. The 1957 rate was the highest recorded since 1950, when it was 24.9.

In California there were 350,525 live births in 1957, an increase of 17,000 over the preceding year. There were 8,704 resident infant deaths last year, compared with 7,998 for 1956. If the infant mortality rate for 1957 had remained at the 1956 level, there would have been approximately 300 fewer infant deaths than actually occurred.

Study of the causes of death reported on death certificates indicates that approximately three-fourths of the increase was due to diseases of the respiratory system, including pneumonia of the newborn. Other categories which show increases include diseases of the central nervous system, congenital malformations, and certain diseases of early infancy such as hemolytic disease of the newborn and prematurity.

* * *

Dr. Dell F. Dullum, former chief radiologist at Letterman Hospital, San Francisco, has been engaged by the department to assist in the development of a state-wide radiologic health program and to strengthen current radioactivity surveillance activities.

Dr. Dullum will serve as department technical consultant, coordinating radiologic health investigations and activities within the agency. In this capacity he will provide consultation to staff on the public health effects of immediate and long-range hazards of nuclear radiation, evaluate radiation safety and tolerance standards, and make recommendations regarding protective and preventive measures.

His responsibilities will extend well beyond concern with radioactive fallout. They will include, as well, industrial exposures to radiation and the problems surrounding medical and dental use of radiation equipment.

Dr. Dullum is a member of the American Board of Radiology, American College of Radiology, Radiology Society of North America, the American Medical Association and the California Medical Association.

* * *

Dr. William H. Clark, a member of the Alameda-Contra Costa County Medical Association, has been named assistant chief of the department's Division of Preventive Medical Services, filling the vacancy left when Dr. Frederic M. Kriete was appointed deputy state health director last year.

Dr. Clark since 1955 has been chief of the Bureau of Adult Health. He joined the department in 1947 as a medical officer in the Bureau of Acute Communicable Diseases. He is a 1941 graduate of the University of California, where he also received his degree in medicine in 1946 and his master's degree in public health in 1948. He was certified to the American Board of Preventive Medicine in 1954.

* * *

Results of a ten-month environmental and medical study of exposure of railroad freight train crews to diesel engine exhaust and sand show no significant amount of acute health damage and no definite difference between those exposed and those unexposed to exhaust products and to the dust from track sanders.

The study, performed by the Bureau of Adult Health and the Industrial Hygiene Laboratory in collaboration with the California Public Utilities Commission, showed that measurable exposures to diesel gases occur when trains are passing through up-grade tunnels. None of the exposures to exhaust constituents, however, approached the maximum acceptable concentration for regular daily industrial exposure. The concentrations were of the order which is experienced in everyday living in urban areas.

In the engineering, chemical and medical procedures, many techniques not previously adapted to the conditions of railroad operation were utilized, and some new methods and modifications of established techniques were evolved. This study was made possible through the cooperation and participation of the four California railroad companies and the four operating railroad brotherhoods.

A five-volume report prepared by the Bureau of Adult Health has been accepted for limited publication by the Public Utilities Commission.

* * *

Physicians desiring further details concerning any of the items in this communication may direct inquiries to the California State Department of Public Health, 2151 Berkeley Way, Berkeley 4.

WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

Meet Your Auxiliary Officers

1958-1959

To better acquaint you with the officers of the Woman's Auxiliary to the California Medical Association, we present the first of a series of photographs and the eligibility of the members of the Executive Board, as well as the appointees who are responsible for the proper procedures in the business, financial and legal aspects of our operation.

These officers represent the experience of many years of service in the Auxiliary and the Medical Association, and have proven their ability to direct the activities of the thirty-four county society auxiliaries and seven branches.

* * *

The President, Mrs. Newell Jones, has been an active Auxiliary member since 1933. She was president of the Los Angeles County Auxiliary in 1945-1946 and has served on the State Board continuously since that time with the exception of one year. As district councilor for a two-year period, editor of *The Courier* for two years, then treasurer two years, a year as parliamentarian and last year as president-elect, her background is well established and she should be of value to the organization. Her husband practices pediatrics in Encino.

Mrs. Jones

* * *

The President-Elect, Mrs. Theodore Poska, is equally well prepared. She has continued her activities in the Humboldt County Auxiliary while serving in many capacities on the state level. Mrs. Poska had the arduous task of writing the twenty-five year history of the Auxiliary, was chairman of Public Relations, second vice-president, first vice-president, and at present is preparing for her duties as president next year. Her husband, "Ted" Poska, who is a member of the Academy of General Practice, practices in Eureka.

Mrs. Poska

First Vice-President, Mrs. Samuel Gendel, has given her time and efforts to the Auxiliary also. Her tour of duty has included *Today's Health;* she was first American Medical Education Foundation chairman, second vice-president, first vice-president, recording secretary, and at this time is repeating as first vice-president. Sophie is planning for a substantial increase in membership and solicits the aid of the doctors to help her. Dr. Gendel specializes in surgery in Fullerton. He is accustomed to his wife's philanthropic activities and enjoys her interest in Auxiliary work.

Mrs. Gendel

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Second Vice-President, Mrs. Warren Bostick, served the Auxiliary for two years as district councilor for District Ten during the time that Dr. Bostick was district councilor for the Association. She admits her knowledge and efficiency in the performance of her duties was influenced by her husband's performance. Two active teenage boys and a busy husband keep the San Rafael manse jumping.

Mrs. Bostick

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Recording Secretary, Mrs. Everett Stone, after a year as *Today's Health* chairman, served the Auxiliary as an expert chairman of Legislation for three years. Her continued interest in medical legislation on the county level and for other organizations is an effective influence on the behalf of a good medical association legislative program. Dr. Stone specializes in preventive medicine; as director of public health for Riverside County, he is almost as busy as his wife.

Mrs. Stone

Treasurer, Mrs. Charles Sprague, a former newspaperwoman, was district councilor for the Second District for two years. She contributed her publications experience as editor of *The Courier* for two years; served as recording secretary; and was second vice-president last year. She earned a master's degree at Redlands University last year and she is homemaker for three teen-agers and her husband, a general surgeon. Her home is Road's End Ranch in Highlands.

Mrs. Sprague

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For actual working hours, the office of corresponding secretary is most demanding. Corresponding Secretary Mrs. Arthur Hurd served a term in this office once before, a few years ago, followed by two years as treasurer and two years as finance chairman. Her knowledge of the membership and the duties of each chairman, as well as the over-all policies of Auxiliary work, is invaluable to the organization, and especially to the president. The Hurd home in San Marino, where Dr. Hurd practices pediatrics, is another busy household with three active teen-agers.

Mrs. Hurd

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The appointment of experienced members in the capacity of Parliamentarian, Finance, and Revisions is imperative to assure the coordination and successful operation of the technical aspects of our program.

As Parliamentarian, Mrs. Lawrence Gundrum gives us the benefit of her years of experience in many state offices and as a past state president. Her advice is invaluable and her judgment is astute. We are fortunate to have Ethel on our Board this year.

The Gundrums have recently moved into a new home at Laguna Beach, but Dr. Gundrum, an ear, nose and throat specialist, still practices in Los Angeles.

* * *

Finance. Mrs. Homer Wolfsen, an active member of the Alameda County Auxiliary, worked with the Physicians' Benevolence program for two years and as district councilor of the Ninth District for two years. With the reputation for keeping her own bank book accurate, we are certain that our financial affairs are in good hands. Dr. Wolfsen—Homer—is a member of the Academy of General Practice and is devoting all of his spare time to the Accident Prevention Committee. The City of San Leandro claims them.

Mrs. Wolfsen

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Revisions. Mrs. Garvin Goble came to the State Board as chairman of Finance two years ago. To utilize her talents for technological accuracy, she was made chairman of Revisions, and she carries on in the same capacity this year. Her awareness of the changing times and the advancing methods of modern procedure will alert us to any necessary changes in the structure of our business methods.

Mrs. Goble

Monnie and Dr. Goble have three active teenager boys. Dr. Goble is a general practitioner. Business, golf, hiking and other sport activities keep them busy in Fortuna.

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Paragraphs of other officers will appear in an early issue of CALIFORNIA MEDICINE.

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

Dr. Norman Topping took office September 2 as the seventh president of the University of Southern California, his alma mater. He will be installed in traditional ceremonies on the campus October 23.

Dr. Topping returned to Southern California from the University of Pennsylvania where he had been vice-president for medical affairs six years. He formerly was an Assistant Surgeon General of the U. S. Public Health Service and associate director of the National Institutes of Health at Bethesda, Maryland, the research branch of the USPHS. While doing research work at the National Institutes of Health he developed the first effective treatment of Rocky Mountain spotted fever.

Dr. Topping is a diplomate of the American Board of Preventive Medicine and Public Health, and is a member of the American Public Health Association, the Association of American Physicians, the Association of American Medical Colleges, the American Association for the Advancement of Science, the American Academy of Tropical Medicine, the American Epidemiological Society and the Society for Experimental Biology and Medicine.

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The American Academy of Physical Medicine and Rehabilitation recently announced the election of **Dr. Clarence W. Dail,** San Gabriel, as president-elect.

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Promotion of **Dr. Thomas H. Brem** to be chairman of the department of medicine in the University of Southern California School of Medicine was announced recently by Dr. Clayton G. Loosli, dean.

The announcement followed the retirement of Dr. Paul Starr, who was head of the department from 1948 to 1955 and then shared the chairmanship with Dr. Brem the past three years, Dr. Brem being in charge of teaching and Dr. Starr in charge of research. Henceforth, Dr. Brem will be responsible for both fields.

A graduate of Stanford and Johns Hopkins, Dr. Brem was on the SC medical faculty from 1939 to 1949, with time out for service as a medical officer during the war. He spent the next five years as a professor at the UCLA medical school, and then returned to clinical teaching at SC in 1954.

SAN FRANCISCO

Two medical research grants totalling over $40,000 have been received by Professor Ronald Grant of the department of physiology, Stanford University, for support of a new program of **studies on functions of the brain.** The program was established earlier this year by a gift of $25,000 from the Zellerbach family of San Francisco.

Studies of the septum will be supported by a $16,900 grant from the National Institute of Neurological Diseases and Blindness, U. S. Public Health Service. A grant of $25,000 from the Office of Naval Research will support studies of the adrenal hormones, epinephrine and norepinephrine.

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Dr. Lewis Thomas, professor of medicine and chairman of the department of medicine of the New York University College of Medicine, New York City, will give the **George Elgie Brown Memorial Lecture** on "The Role of Hypersensitivity in Cardiovascular Diseases," on October 25 at the 31st annual meeting of the American Heart Association at San Francisco October 24 to 26. This lecture was established in memory of Dr. George Elgie Brown (1885-1935), head of a section of medicine in the Mayo Clinic, Rochester, Minnesota, and associate professor of medicine in the Mayo Foundation, Graduate School, University of Minnesota.

SAN MATEO

Among officers elected by the American Congress of Physical Medicine and Rehabilitation was **Dr. Frances Baker,** San Mateo, as secretary.

GENERAL

The American Goiter Association has announced the opening of competition for the annual **Van Meter Prize Award** of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the association which will be held in the Drake Hotel, Chicago, Illinois, April 30, May 1 and 2, 1959.

The competing essays, which must be entered by January 15, 1959, may cover either clinical or research investigations, should not exceed 3,000 words in length. Further details may be obtained from the secretary of the association, Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, New York.

A place will be reserved on the program of the annual meeting for the presentation of the winning essay by the author if it is possible for him to attend.

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A new edition of the booklet, **"Immunization Information for International Travel,"** was issued recently by the Public Health Service of the Department of Health, Education, and Welfare.

The booklet is designed primarily for use of travelers going abroad and for health departments and physicians. It gives current details on immunization requirements for persons entering the United States, including Americans returning from abroad. It also lists requirements and recommendations of the Public Health Service for American travelers.

Information on bringing pets into the United States from other countries is included in a special section.

Prepared by the Division of Foreign Quarantine of the Public Health Service, the booklet is for sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 30 cents.

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A prize for the best paper on clinical research in the field of infertility is to be awarded for one of the presentations to be read at the annual meeting of the Pacific Coast Fertility Society in Palm Springs, November 20 to 23. The prize will consist of complete round trip transportation and living expenses, to the annual meeting of the

American Society for the Study of Sterility, April 3 to 5, 1959, at the Shelbourne Hotel, Atlantic City. The prize is being awarded by the E. R. Squibb Co.

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The Washington State Heart Association in cooperation with Washington State Department of Health announced the Tenth Annual **Symposium on Heart Disease** to be held Friday and Saturday, October 17 and 18, at the University of Washington Health Sciences Building, Seattle. Guest speakers and their subjects:

Sir George White Pickering, University of Oxford, England, "Concept of Essential Hypertension," and Starling's "Concepts of Heart Failure in Man."

Dr. Carleton Chapman, University of Texas, "Hemodynamic Effects of Exercise," and "Response of Hypertensive Patients to Physical Exercise."

Dr. Lewis Dexter, Harvard University, "Clinical-Pathological Correlations of Congestive Heart Failure," and "Cardiac Output and Congestive Heart Failure."

Dr. James V. Warren, Duke University, "Treatment of Congestive Failure," and "Natural History of Hypertensive Disease in Man and Hypertension in Giraffes."

POSTGRADUATE
EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Aviation Medicine. Wednesday, Thursday and Friday, October 22, 23 and 24. Nineteen hours. Fee: $65.00.

Hematology: Abnormal Cell Cytology (San Bernardino). Tuesdays, October 28 through December 16. Twenty-four hours. Fee: $40.00.

Practical Clinical Chemistry for Laboratory Technologists. Wednesdays, October 29 to December 17. Twenty-four hours. Fee: $35.00 plus $5.00 breakage fee. $20.00 for lecture only.

Removal of Foreign Bodies from Trachea, Bronchi and Esophagus. Saturday and Sunday, November 8 and 9. Nine hours. Fee: $110.00.

Obstetrics and Gynecology. Thursday, Friday and Saturday, November 20, 21 and 22. Eighteen hours. Fee: $50.00.

Current Concepts of Peripheral Vascular Disease. Friday and Saturday, December 5 and 6. Fifteen hours. Fee: $50.00.

Fractures. Friday and Saturday, December 12 and 13.†

Physiological and Clinical Consideration On:

Endocrine System. Wednesday, December 3, 1958. Six hours.‡

Gastrointestinal Tract. Wednesday, December 17, 1958. Six hours.‡

Respiration. Wednesday, January 7, 1959. Six hours.‡

Kidney. Wednesday, January 21, 1959. Six hours.‡

Nervous System. Wednesday, February 4, 1959. Six hours.‡

Clinical Traineeships — Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Psychiatric Orientation for General Practice (Herrick Hospital, Berkeley). Sunday through Tuesday, October 26 to 28. Twenty-one hours. Fee: $50.00.

Arthritis and Connective Tissue Diseases. Monday through Wednesday, November 3 through November 5. Twenty-one hours.*

Urology. Friday, November 7. Seven hours. Fee: $20.00.

Proctology. Saturday, November 8. Seven hours. Fee: $20.00.

Heart Symposium (Santa Rosa). Wednesday, November 12. Seven hours. Fee: $15.00.

Plastic Surgery. Thursday, November 13. Seven hours. Fee: $20.00.

Hand Surgery. Friday, November 14. Seven hours. Fee: $20.00.

New Look in Speech Problems. Saturday, November 15. Seven hours. Fee: $12.50.

Ophthalmology — External Diseases. Wednesday through Saturday, December 3 through December 6. Twenty-eight hours.*

Disturbances in Gastrointestinal Motility. Sunday through Tuesday, December 7 through 9. Twenty-five hours.*

Postgraduate Clinics in Dermatology. Friday and Saturday, January 16 and 17. Fourteen hours. Fee: $40.00.

Pharmacologic Approach to the Study of the Mind. Sunday through Tuesday, January 25 through 27, 1959. Twenty-five hours.*

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

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†Fees and hours to be announced.

‡Fee: $20.00 each or $80.00 for all five courses.

*Fees to be announced.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Homecoming Course. October 16 and 17. Two-day refresher course to cover advances in diagnosis and treatment developed in last five years. Tuition: Alumni, $25.00; Non-alumni, $50.00.

Symposium on Sexual Problems as Seen in General Practice. November 7. Tuition: $25.00. Hotel Statler, Los Angeles.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14, 1959. (As a time and money saver, round trip air travel is also possible July 29 to August 10, 1959.)

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Audio-Visual Postgraduate Refresher Courses. Courses are made up of four or more half-hour lectures each, recorded on hi-fi magnetic tape and illustrated by 35-mm. filmstrips or slides in full color, and adapted for use on any standard tape recorder and filmstrip or slide projector, automatic or manual.

Contact: Paul D. Foster, M.D., chairman, Committee on Audio-Visual Courses, College of Medical Evangelists School of Medicine, 316 North Bailey St., Los Angeles 33.

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Thorax, Abdomen and Pelvis (27 periods, 121 hours), January 7 through April 15, 1959. Tuition: $125.00. **Head and Neck** (14 periods, 63 hours), April 22 through June 3, 1959. Tuition: $75.00.

Surgical Anatomy—Thorax, Abdomen and Pelvis (14 periods, 28 hours), January 7 through April 15, 1959. Tuition: $50.00. **Head and Neck** (12 periods, 24 hours), April 22 through June 3, 1959. Tuition: $35.00.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE CIRCUIT COURSES

West Coast Circuit in cooperation with College of Medical Evangelists. Santa Maria, November 19; Ojai, November 20.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel Californian, Fresno. (Local chairman not yet appointed.)

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25, 26 and 27, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

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Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued on November 1, 1958. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

OCTOBER MEETINGS

California Society of Internal Medicine Annual Meeting, October 17 to 19, Ahwahnee Hotel, Yosemite. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Clyde C. Greene, M.D., secretary-treasurer, 350 Post St., San Francisco 8.

California Board of Medical Examiners—Written Examination, October 20 through 23, Sacramento. *Contact:* Louis E. Jones, M.D., 1020 N Street, Sacramento.

American Heart Association Scientific Sessions and Meetings, October 24 to 28, Fairmont Hotel and Civic Auditorium, San Francisco. *Contact:* J. Keith Thwaites, executive director, California Heart Association, 1428 Bush Street, San Francisco 9.

Los Angeles County Heart Association 28th Annual Professional Symposium, October 29 and 30, Wilshire Ebell Theater. *Contact:* Los Angeles County Heart Association, 660 S. Western Ave., Los Angeles 5, DUnkirk 5-4231.

Hawaii Heart Association, Inc. Special Cardiological Sessions, October 30 through November 1, Princess Kaiulani Hotel, Honolulu. *Contact:* Alfred S. Hartwell, M.D., c/o Hawaii Heart Association, 1018 Lunalilo St., Honolulu.

Tenth Western Institute on Epilepsy, University of Colorado School of Medicine, October 30 through November 1, Denver, Colorado. *Contact:* C. Wesley Eisele, M.D., University of Colorado Medical Center, 4200 East Ninth Ave., Denver.

San Diego County Heart Association 8th Annual Symposium on Heart Diseases, all day, October 31, U. S. Naval Hospital Auditorium, San Diego. *Contact:* O. M. Avison, executive director, San Diego County Heart Association, 1651 Fourth Ave., San Diego, BElmont 4-5101.

NOVEMBER MEETINGS

Santa Barbara County Heart Association, Professional Symposium, 9 to 5 p.m., November 1, Biltmore Hotel, Santa Barbara. *Contact:* Mrs. Katherine McCloskey, executive director, 18 La Arcada Court, Santa Barbara.

California School Health Association annual meeting, November 8 and 9, Hacienda Hotel, Fresno. *Contact:* Miss Kathleen Fox, health educator, City of Long Beach Department of Public Health, 2655 Pine Ave., Long Beach 6.

Sonoma County Heart Association Fifth Annual Symposium on Cardiovascular Disease. Program by University of California, November 12, 8:30 a.m. to 5 p.m., Odd Fellows Hall, Santa Rosa. *Contact:* Jack Froom, M.D., 210 Fourth Street, Petaluma.

California Board of Medical Examiners—Oral Examination, November 15, San Francisco. Oral and Clinical Examination for Foreign Medical School Graduates, November 16, San Francisco. *Contact:* Louis E. Jones, M.D., 1020 N Street, Sacramento.

Pacific Coast Fertility Society, Annual Meeting, November 20 through November 23, 1958. Hotel El Mirador, Palm Springs, California. *Contact:* Anah C. Wineberg, M.D., secretary, 3120 Webster Street, Oakland 9.

1959 MEETINGS

Departments of Otolaryngology of the College of Medical Evangelists and University of Southern California School of Medicine, jointly present a postgraduate course in "Reconstructive Surgery of the Nasal Septum and External Nasal Pyramid," at White Memorial Hospital, Los Angeles. Sessions start Tuesday evening, January 6, through Friday, January 9, 1959, and will resume Monday, January 12, ending noon Friday, January 16, 1959. *Contact:* Leland House, M.D., 1720 Brooklyn Avenue, Los Angeles 33.

Alameda-Contra Costa Medical Association and the Institute for Metabolic Research Seventh Annual Symposium on Metabolic Problems. All day, February 9 through February 11, 1959. Auditorium, Highland-Alameda County Hospital, Oakland, California. *Contact:* L. W. Kinsell, M.D., director, Institute for Metabolic Research, 2701 14th Avenue, Oakland 6.

American College of Chest Physicians Fourth Annual Postgraduate Course on Diseases of the Chest, February 16 through February 20, 1959. Sir Francis Drake Hotel, San Francisco, California. *Contact:* Executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

California Medical Association Annual Meeting, February 22 through February 25, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

Los Angeles County Heart Association Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., Chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

Western Branch, American Public Health Association Annual Meeting. June 1 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

THE PHYSICIAN'S *Bookshelf*

MENTAL HEALTH IN INDUSTRY—Alan A. McLean, M.D., Psychiatric Consultant, International Business Machines Corporation; and Graham C. Taylor, M.D., Allan Memorial Institute of Psychiatry, McGill, McGraw-Hill Book Company, Inc., Blakiston Division, New York, 1958. 262 pages, $6.50.

One of the most serious problems facing management today is the emotionally unstable employee, be he an executive or laborer. Poor performance or frequent absence from work are costly. Invariably the first to be confronted with the problem of handling the mentally ill worker is the supervisor or foreman. The authors of "Mental Health in Industry" have kept this in mind and have provided appropriate guide lines as well as case histories.

This book is divided into four parts with an introduction by Dr. William G. Menninger. Part I, Setting; Part II, People at Work; Part III, the Emotionally Disturbed; and Part IV, Mental Health Aids which includes a chapter on Visual Aids.

The book opens with the question, "Why do people think, feel and behave at work as they do?" The authors then set about to analyze the various facets of the question and to answer such in lay language. They adhere to a claim made in the preface of the book, namely "the psychiatrist has no nostrums, no panaceas, no gimmicks to offer an industrial society."

Prior to their experience inside the walls of industry both Dr. McLean and Dr. Taylor had intensive training at Cornell University under a grant from the Carnegie Corporation of New York. This book has definite utility for those at all levels of management as well as for the part or full-time industrial physician.

R. T. Johnstone, M.D.

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ROENTGEN-DIAGNOSTICS—Progress Volume I—H. R. Schinz, R. Glauner, E. Uehlinger; with the collaboration of W. E. Baensch, J. E. W. Brocher, U. Cocchi, G. Glocker, W. Hess, R. Janker, O. Norman, R. Prevot, G. Schoch, E. Uehlinger, S. Welin, J. Wellauer, E. Zdansky. Translated from the German by James T. Case, M.D., D.M.R.E. (Cambridge). Grune & Stratton, Inc., New York, 1958. 623 pages, with 545 figures containing 892 illustrations, $35.00.

This is the first English translation of the March 1957 German edition of a worthy companion piece to the valuable four-volume text on Roentgen Diagnosis. The opening chapter deals with protection from radiation injuries in diagnostic work, and is succeeded by a series of chapters dealing with recent advances in the diagnosis of various body systems and conditions.

In the section on the spine, the present status of so-called functional examinations (motion and posture studies) and of tomography is well outlined. Anomalies of the occipitocervical junction are well described and illustrated.

The chapter on cystic lesions of bone is followed by one on roentgen evaluation of cardiac function in the adult. Progress in angiocardiography of congenital anomaly and in aortography is then considered. There is an excellent chapter on the diagnosis of certain disorders of the pulmonary system, notably pulmonary fibrosis, pulmonary atrophy and pulmonary collagen disease.

There are several chapters dealing with various entities in the gastrointestinal tract, with only one of which this reviewer cannot quite agree. This is the chapter dealing with so-called benign hypertrophy of the pylorus in adults. Many of the cases illustrated by the author of this section are frank pyloric ulcers with edema or scarring. The sections on carcinoids, nonsclerosing ileitis and miscellaneous gastric lesions are good.

The section on colonic polyps describes in considerable detail the elaborate technique used by the author for the detection of these small tumors of the bowel. Having gone to great pains to detect these, the auhor states that "the great number of cases of polyps which can be diagnosed by this method has in itself excluded the possibility of treating all these cases radically." Since a large number of these cases are detected in children, and the radiation dose to the gonads is unavoidably large in such clients, the virtue of the method might be questioned. The author does quote some authorities on the matter of the true nature of polyps, many believing that a majority of these lesions are benign throughout their course.

The work is well printed, beautifully illustrated and well indexed. It should be of value to all clinical radiologists.

L. Henry Garland, M.B.

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NEOMYCIN—Its Nature and Practical Application—Selman A. Waksman, Editor. Published for The Institute of Microbiology, Rutgers University, by The Williams and Wilkins Company, Baltimore, Maryland, 1958. 412 pages, $5.00.

The vast literature dealing with antimicrobial agents makes it impossible for the practicing physician to remain well informed in this field. Monographs dealing with individual agents are most useful in assisting him in his task and a number have been published, including an earlier one about neomycin under the same editorship which appeared in 1953.

The present book has been completely rewritten in a series of 30 chapters by more than this number of authors, all of whom have had considerable experience in the use of neomycin. In addition, a bibliography of 691 titles is included as well as a complete list of all neomycin preparations available commercially at the time of publication.

The book is an authoritative statement about a valuable though toxic antimicrobial agent. It gains increased value from the recent introduction of kanamycin, a closely related, but apparently safer drug. Much that has been learned about the use of neomycin will be applicable to this new antibiotic. This book is a must for physicians with special interest in infectious disease and for hospital and other medical libraries. Other practitioners should be aware of its existence and consult it frequently.

ANXIETY, NEUROSIS AND PSYCHOSOMATIC TEST—M. J. Freeman, Ph.D. Grune and Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1957. 1 manual, $1.25, 10 tests and 10 profile sheets, $1.75.

The Freeman anxiety neurosis and psychosomatic test is a 139 item, objectively administered, and objectively scored instrument described as measuring certain specific constituents of personality, i.e., "the nuclear anxiety structure underlying the symptom complex of anxiety neurosis, psychosomatic involvements, and the particular neurosis trends of this emotional disorder." From 139 items the test yields six scores or variables or categories of behavior of a predominately diagnostic variety and three scoring categories referring to structural aspects of the personality, i.e., "overconscientious type," "comfort type," "composite type." However, the scoring norms are provided only for the "manifest anxiety portion of the test and the psychosomatic portion of the test."

The manual begins very properly with some general statements regarding what the author refers to as "nuclear theory of anxiety neurosis." He states that the test is based upon the theory that anxiety is a definite underlying variable of neurosis pathology. This review intends to evaluate the test itself and not the theory which underlies it and therefore, for such discussions I refer you to the manual, or to the author's publications listed below. The author specifies six sub-categories of a somewhat diagnostic nature which may be considered in relationship to the anxiety neurosis syndrome. These include: anxiety neurosis, psychosomatic syndrome, neurasthenia psychasthenia, conversion hysteria, and hypochondriasis. He states that the test presents certain advancements in personality testing, and that it disguises its true purpose. He states it eliminates weaknesses inherent in past measurement instruments of the objective type by eliminating faking, by measuring a distinct anxiety neurosis, and psychosomatic syndrome and by showing a symptom complex to the patient's anxiety neurosis. He recommends that the test be used as an effective instrument for discovering and evaluating the "basic nuclear emotional disturbance of the patient." And states that it provides the physician with "a valid psychological instrument to assist in differential diagnosis with respect to functional organic disorders."

A careful examination of the test and of the test manuals suggests that the author has not as yet achieved these ambitious goals.

The test and the test manual have been evaluated using American Psychological Association criteria as a guide.[1] Although the test manual follows the general form required for published manuals by the American Psychological Association there are certain areas of data left unstated. These concern primarily measures of validity. These were not adequately described in the manual itself and it became necessary for the reviewer to obtain copies of Dr. Freeman's two original publications describing the development of the test.[2,3] Using these two publications and the test manual as a source several critical comments could be made of the test. It was felt that the author provided few clear descriptions of the criterion for classifying patients in either normal or abnormal standardization groups. This criticism applies primarily to the "psychosomatic scale" rather than to the scale measuring manifest anxiety, although neither is described in the manual. The descriptions of validation included in the manual are not adequate to evaluate the test satisfactorily.

There was unfortunately no clear indication of the tests' ability to differentiate between "anxiety neurotics" and patients manifesting other kinds of psychiatric disorders such as chronic brain syndromes, chronic and acute psychoses, etc. It was also disappointing to find that the author attempted no study to describe the relationship of his test scores to other objective tests. This is particularly surprising since many of his sub-scale categories parallel scales from the Minnesota Multiphasic Personality Inventory.

Probably the most telling criticism of the test is only apparent when one refers to the original journal article. The manual provides no distribution of scores on any of the test scales and does not make clear the rather significant overlap between normal and abnormal test groups as described in the subsequent publications. Despite the fact the subjects were selected for the validation of the manifest anxiety scale from cases "in which manifest anxiety was severe," the overlap between the two groups is very great. Using the cut-off scores he describes, one would identify some thirty per cent of the general population as possessing pathological amounts of manifest anxiety. The general article is somewhat evasive about this but an even greater percentage of his pathological group might be categorized as normal when using the same cut-off score. This probability of false negatives or false positives suggests very strongly that this test should not be used in making either clinical diagnoses or clinical decisions regarding patients. Additionally, the author presents little evidence to support his statement regarding the invulnerability of the test to faking.

The test itself is an interesting effort to evaluate clinical behavior of constant concern to the practicing physician. The approach is an appropriate one to the task and the test items interesting and probably not threatening for the patient. It is felt, however, that the procedure as presently constituted should be used only in research or experimental situations. Convincing experimental and clinical evidence regarding the validity of the diagnosis using the procedure has not been sufficiently demonstrated.

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Alexander C. Rosen, *Ph.D.*

* * *

ELECTROCARDIOGRAPHY—Michael Bernreiter, M.D., F.A.C.P., Assistant Clinical Professor of Medicine, University of Kansas Medical School; Chief of Electrocardiography, St. Mary's Hospital, Kansas City, Missouri; Fellow of the American College of Cardiology and Fellow of the American College of Chest Physicians. J. B. Lippincott Company, East Washington Square, Philadelphia, 1958. 134 pages, $5.00.

This book on electrocardiography is intended primarily for the novice. The entire text is presented in a didactic manner omitting all electrocardiographic controversies. Vector analysis is never mentioned.

The introductory subject of electrophysiology is elementary and conventional in outline. The brevity and simplicity of the discussion material in all the chapters, especially hypertrophy and infarction, leaves too great a hiatus of knowledge to be overlooked.

The book is lucidly written and amply illustrated. However, it offers no advantages over the standard, elementary texts already in print.

HEADACHE—Diagnosis and Treatment—Second Edition—Robert E. Ryan, B.S., M.D., M.S. (in Otolaryngology), F.A.C.S., St. Louis University School of Medicine. The C. V. Mosby Company, St. Louis, 1957. 421 pages, $6.75.

The author has a consuming interest in headache and feels that this subject should have considerable emphasis. He has tried to differentiate his problem into a great variety of forms. The result is put out in 56 chapters comprising a book of 421 pages.

The presentation is rambling, repetitious and personalized. The combination of this with numerous and recurring quotations from and reference to personal medical literature makes one feel that this book is blown up to too large a size.

Many of the chapters have summaries at the end. These summaries might well have constituted entire chapters, while one good differential table for diagnosis and another for therapy could have taken the place of many pages.

We do not know any reason to dedicate a separate chapter to each variant of headache, such as Chapter 10, Migraine, Chapter 11, Abdominal Migraine, Chapter 12, Ophthalmic Migraine, with repetition of the theory, diagnosis and treatment each time. A similar situation exists in Chapters 13 on Tension Headache and 14 on Generalized Vasodilating Headache—in which the treatment listed is practically the same.

The second edition introduces several new chapters, including those on tranquilizing drugs and histamine. These are already adequately covered in the various chapters on specific kinds of headache and, unfortunately, once again constitute repetition.

This work represents the personalized experience of one individual with one group of medical syndromes. As such, it may be of interest to the student of this subject. But it should have been a much smaller book.

EDGAR WAYBURN, M.D.

* * *

CLINICAL OBSTETRICS AND GYNECOLOGY—March, 1958—A Quarterly Book Series—Volume I, Number 1—Medical Problems in Pregnancy—Edited by Curtis J. Lund, M.D.; and **Management of Endocrine Problems**—Edited by Allen C. Barnes, M.D., Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y., 1958. 288 pages, $18.00 per year for four consecutive numbers issued quarterly.

As stated in the publisher's note this is the first of a series of books designed to fill a gap between the journals with their reports of original work and the textbooks with their complete coverage of a subject. Each volume is to contain pertinent discussions on two main topics. This first volume is devoted to Medical Problems in Pregnancy, edited by Curtis J. Lund, and Management of Endocrine Problems, edited by Allan C. Barnes. The editors have chosen phases of their subjects which are of great interest to all who practice obstetrics and gynecology, be they general practitioners or specialists, though it is to the former group that this publication is directed especially. Outstanding contributors have been chosen, usually men who have had a special interest in the topic about which they have been asked to write. The table of contents would give an excellent idea of the scope and nature of this volume but would be tedious to read. Representative examples are: From the symposium on Medical Problems in Pregnancy, Anemia in Pregnancy by Roy G. Holly, Pregnancy and Heart Disease by Curtis Lund, Pregnancy and Viral Hepatitis by Laurence G. Roth, Tuberculosis and Pregnancy by John McKelvey and Poliomyelitis Complicating Pregnancy by Paula Horn. From the symposium on Endocrine Problems, good examples are: Diagnostic Aids by Irving Rothchild, Dysfunctional Bleeding by Emil Holmstrom, Theatened and Habitual Abortion by M. Edward Davis and Adrenogenital Syndrome and Adrenal Hyperplasia by James T. Bradbury.

It would be impossible to review the details of the various chapters; suffice it to say that for the most part their contents reflect current authoritative information and viewpoints. Since some subjects are controversial and the management of some conditions remains unsettled it is inevitable that we have presented the individual's own particular point of view. Usually other points of view of importance have been mentioned also, so that real bias seems singularly lacking. Actually this is what one would expect from such a fine list of contributors.

I should also like to add that these chapters have the very great virtue of reasonable brevity. The entire volume contains 288 pages. The type is rather large and easy to read. A number of contributors have included very helpful illustrations and diagrams in their chapters.

It is my feeling that this volume represents the beginning of an excellent series of symposia which I would expect to be popular indeed.

DANIEL G. MORTON, M.D.

* * *

OCULAR ALLERGY—Frederick H. Theodore, M.D., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Abraham Schlossman, M.D., Clinical Assistant Professor of Ophthalmology, College of Medicine, State University of New York. With Chapters by William B. Sherman, M.D., and Robert S. Coles, M.D. The Williams and Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2, Md., 1958. 420 pages, $12.00.

Ocular allergy is a very comprehensive and new approach to a very protean subject.

The book contains 399 pages of subject matter divided into 21 chapters. There are 62 references and an excellent index.

The book is well documented and extremely well written. The diagnosis is followed by the present day accepted form of treatment.

The book covers practically all the present day concepts of etiology in eye pathology because an allergic factor can be found in practically all of them.

An excellent discussion of the granulomatous and nongranulomatous diseases is followed by modern day therapy and its dangers and advantages.

A book of this type has not been published for several decades and should be of especial interest to practicing ophthalmologists.

ALFRED R. ROBBINS, M.D.

* * *

CEREBROSPINAL FLUID—Production, Circulation and Absorption—Ciba Foundation Symposium—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., editors for the Ciba Foundation. Little, Brown and Company, Boston, 1958. 335 pages, with 141 illustrations, $9.00.

This book records the proceedings of a symposium on the cerebrospinal fluid held under the auspices of the Ciba Foundation. A group of noted authorities in the field from Great Britain, Europe, and the United States presented papers in their particular field of knowledge, and the group entered into a discussion of the material presented. Much of the content is of such a specialized nature as to be somewhat out of the scope of the practicing physician, nor is the final answer to the problem to be found in the book. It does form, however, an excellent source of material for an appraisal of present knowledge of the subject, with critical evaluation by experts, and should certainly be available to all neurologists.

HENRY NEWMAN, M.D.

PRACTICAL HANDBOOK OF MIDWIFERY AND GYNAECOLOGY—Fifth Edition—For Students and Practitioners—W. F. T. Haultain and Clifford Kennedy. E. & S. Livingstone, Ltd., London, 1957. The Williams and Wilkins Company, Baltimore. 410 pages, $7.00.

This book covers the clinical aspects of obstetrics and gynecology in a synoptic fashion. It is hardly more than a set of authoritative notes, the bare bones of the subjects. Much of the information is recorded in tabular form without much in the way of explanatory exposition. Considerable attention is given to differential diagnosis, tabulating the expected findings for the various possibilities. For a student studying for an examination I could imagine that such a volume might serve as an excellent review outline. I should not imagine that it would have much appeal otherwise. Since the book was written by Englishmen it has a distinctly British flavor, in terminology and in the character of the management suggested, which would limit its usefulness for students in this country.

For the most part the concepts expressed are widely accepted ones, though one does encounter statements which seem either odd or antiquated to this reviewer. For example, in discussing prenatal care the following statements appear:

"Crowded entertainments are apt to bring on syncope in some women and are therefore to be avoided."

"Warm underdrawers are always to be worn."

"Excessive diet may increase the size of the child."

"Intercourse must be prohibited after the seventh month of pregnancy."

"False pains are usually due to constipation."

A considerable section is devoted to a midwifery bag for home delivery and the conduct of labor under such circumstances.

A bad feature, to my mind, is the inclusion of many drugs, procedures and treatments without comment as to their places in the scheme of things, i.e., frequently, the preferred plan is not clearly indicated.

I do not believe that this book has a place on the American scene.

Daniel G. Morton, M.D.

* * *

CLINICAL OBSTETRICS AND GYNECOLOGY—June, 1958—A Quarterly Book Series—Volume I, Number II—Toxemias of Pregnancy—Edited by Louis M. Hellman, M.D.; and **Fibromyomas of the Uterus**—Edited by Robert A. Kimbrough, M.D. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y., 1958. Price: $18.00 per year for four consecutive numbers issued quarterly.

This volume is the second of the series on Clinical Obstetrics and Gynecology to be published by Paul B. Hoeber, Inc. It will be recalled that these publications are designed to fill the gap between the journals and the textbooks, and that they represent authoritative current opinion. This particular volume contains two symposia, the first on Toxemias of Pregnancy, edited by Louis M. Hellman, Professor of Obstetrics and Gynecology, State University of New York, Downstate Medical Center, Brooklyn, N. Y., and the second on Fibromyomas of the Uterus, edited by Robert A. Kimbrough, Professor of Obstetrics and Gynecology, Schools of Medicine of the University of Pennsylvania, Philadelphia, Penna. Both of these editors are eminently qualified for the jobs which they have done.

Among the contributors to the symposium on Toxemias of Pregnancy are Leon Chesley whose subject is the Renal Excretion of Sodium in Women with Pre-eclampsia, Milton McCall on Circulation of the Brain in Toxemia, J. C. McClure Browne on the Uterine Circulation in Toxemia, Robert Nesbitt on Pathology of the Placenta in Toxemia, N. S. Assali on Treatment of Eclampsia and Pre-eclampsia, and H. L. Sheehan on Causes of Maternal Death in Toxemia. The chapters are brief and to the point and certainly present the thought of today. One finds interesting and helpful sections on the hormonal changes associated with toxemia and on the use of hypotensive drugs in treatment.

My only criticism of the symposium on Fibromyomas of the Uterus is that there is a considerable amount of overlap. This is inevitable I suppose when the various phases of the subject are considered by a dozen different contributors. Kimbrough's team includes such men as Roger Scott, H. S. Everett, Leon Israel, Eugene Edwards, Virgil Counsellor, Richard Te Linde, I. C. Rubin, and John Parks. One finds all of the clinical aspects of this disease considered in a very satisfactory manner. Dr. Rubin's section on the relation of fibromyomas to sterility is quite thorough and is interesting indeed, representing as it does the opinions and results of one whose long and fruitful life has been dedicated to the general subject of infertility. I feel certain that the reader will be interested in Dr. Rubin's assessment of the value of myomectomy in the treatment of the infertile patient who has a myomatous uterus. Also it is interesting to contrast the attitudes of our authorities toward abdominal versus vaginal hysterectomy for uterine fibromyomas.

One minor defect in this particular volume is that the page dealing with contents lists the chapters on the Toxemias of Pregnancy under the heading Symposium on Fibromyomas of the Uterus, Robert A. Kimbrough, guest editor, and heads the section on fibromyomas with Symposium on Toxemias of Pregnancy, Louis M. Hellman, guest editor. This was a proofreading error no doubt.

Daniel G. Morton, M.D.

* * *

ACTION OF RADIATION ON TISSUES—An Introduction to Radiotherapy—A. Lacassagne, Chief of Service of Pasteur Institute, and G. Gricouroff, Chief of the Laboratory of the Curie Foundation (Radium Institute). Translated by Clarence C. Lushbaugh, M.D., and Gretchen R. Riese, M.S., Los Alamos Scientific Laboratory, University of California. Grune & Stratton, Inc., 381 Fourth Avenue, New York, 1958. 199 pages, $6.25.

The purpose of this short monograph is to describe the authors' viewpoints on the action of radiation on tissues, as an introduction to the clinical use of radiotherapy. The original work was prepared in 1939 and published in 1941; the present volume attempts to bring this up to date, and includes a small amount of material on the effects of artificial radioactive isotopes.

There are chapters on the biological action of radiations of various types, and then a series of chapters on the effects of radiations on specific tissues such as skin, intestinal epithelium, respiratory epithelium, urinary tract, genital system, osseous system, endocrine system, and nervous system.

Much of the material is in essence a historical review of the effects of radiation on the different body systems, based largely on animal experimentation. As a result, the manual actually provides little new information, but does furnish an excellent bibliography of the French and German literature on experimental radiotherapy. The translators have included a few English and American references. The work can be recommended for the research student in radiobiology, but probably has only passing interest for the student of clinical radiology. To be of much value to the latter, it would be desirable for the distinguished authors to add sections on the response of human tissues to radiations, and the basic biologic reactions involved in clinical radiotherapy, especially of cancer.

The work is well printed. There is a good author and subject index.

L. Henry Garland, M.B.

PSYCHOPROPHYLACTIC PREPARATION FOR PAINLESS CHILDBIRTH—Isidore Bonstein, M.D., Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1958. 143 pages, $2.50.

This little book is an effort to explain the French adaptation of natural childbirth, particularly as practised in Paris by Lamaze, who claims his psychoprophylactic method is based on Pavlov's conditioned reflex. After a rather confusing description of some of Pavlov's experiments, and some random comments on the nature of pain, the major part of the volume is devoted to eight lectures to be given to pregnant women at weekly intervals during the final ten weeks of gestation. The usual breathing and relaxing exercises are included for homework, and it is repeatedly stressed that the patient must learn to "release the perineum" on command. When this is done properly, we are told, the birth of the head may stimulate an intense thrill similar to that of orgasm.

It is pointed out that the failure rate with this method is around 10 per cent. Failures allegedly are due to inadequate study by the obstetrician, poor teaching techniques, or to ignorant hospital personnel who insist on using the word "pain" in the maternity area. The author implies that it may be difficult to achieve good results for women doctors, wives of doctors, or nurses.

The demand for this book is not likely to be great. Those now using the natural childbirth system will be familiar with the author's techniques; others will not be persuaded to abandon their present practices.

Chas. E. McLennan

* * *

REVIEW OF PHYSIOLOGICAL CHEMISTRY—Sixth Edition, 1957. Harold A. Harper, Ph.D., Associate Professor of Physiological Chemistry, University of California School of Medicine, San Francisco. Lange Medical Publications, P.O. Box 1215, Los Altos, California. 376 pages, $4.50.

This is the sixth edition of this work, and the author's expressed aim is that it will meet the needs of physicians who are preparing for state and specialty boards, as well as those of the practicing physician who wishes to keep up-to-date. These aims have been reasonably well met in that the book is clearly organized and the material is simply presented. The charts, tables, and schematic representations are well done. The book is most accurately described as a quick reference or review, and would not satisfy anyone who wished to go deeply into the many large topics discussed. It is too bad that gross errors of fact occasionally creep in. For example, the statement that the macrocytic anemia of liver disease is owing to failure to store erythrocyte maturation factor is many years out of date (page 263). There is the further statement that in liver disease declines in the production of fibrinogen and prothrombin will be reflected in a prolongation of the blood clotting time. This is seldom true for fibrinogen, and probably never true for prothrombin (page 263). The color index is briefly discussed rather than the concept and expression which has supplanted it the last two decades, the mean corpuscular volume, hemoglobin, and hemoglobin concentration (page 138). On page 17 there is a curious paragraph devoted to "Immunological Polysaccharides," with those of bacterial origin alone being discussed. It would seem difficult to mention this subject at all without dwelling on blood group polysaccharides which certainly have received the majority of attention in this area. But aside from these objections the book should be very useful to the occasional rather than the steady student of physiological chemistry, which is, after all, to say that it will meet the needs of the majority of physicians.

William P. Creger, M.D.

ALCOHOLISM—Arnold Z. Pfeffer, M.D., formerly Associate Clinical Professor of Psychiatry, College of Medicine of New York University. Grune & Stratton, New York, 1958. 98 pages, $6.50.

This book of less than a hundred pages should be read by all who have in their practice any dealings with alcoholic patients, and this really includes all physicians. It can also be read with profit by industrialists and all employers, since it is strongly oriented to the problem of the alcoholic in industry. The present day concepts of the etiology of alcoholism, and the resources at the command of the physician in the treatment of the disease, are clearly set forth without bias or prejudice. The author's experience in dealing with the alcoholic is plainly evident from his description of the alcoholic personality. The whole approach is from the commonsense angle, and although reading the book will in no wise equip the physician to treat the alcoholic, it will enable him to guide such patients to a source of adequate treatment. It is to be highly recommended.

Henry Newman, M.D.

* * *

HUMAN INFERTILITY—C. Lee Buxton, M.D., Med. Sc.D., Professor and Chairman, Department of Obstetrics and Gynecology, Yale University School of Medicine; and Anna L. Southam, M.D., Assistant Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University; with a chapter on Endometrial Diagnosis by Earl T. Engle, Ph.D., Professor of Anatomy, College of Physicians and Surgeons, Columbia University. Paul B. Hoeber, Inc., 49 East 33rd St., New York, 1958. 229 pages, $7.50.

In this nicely printed and well illustrated volume, Buxton and Southam relate their experiences with some fifteen hundred infertile couples whom they followed for from one to ten years. It is a common sense, down to earth book with a pleasing literary style and exceptionally clear tables. The data have been subjected to careful statistical analysis wherever indicated. In addition to the usual discussions of ovarian, tubal, endometrial, and cervical factors in infertility, there are brief but thoughtful sections dealing with psychological factors and sociological implications. The histological details of the endometrial cycle are well described and depicted in a special chapter by the late Earl T. Engle, to whom the book is dedicated.

The authors of this monograph must be complimented for their unbiased look at a new clinical specialty which has attracted considerable numbers of uncritical practitioners, many of whom have not maintained what Buxton aptly calls an even balance between enthusiasm and intellectual skepticism. Anyone who has occasion to deal with the infertile couple should read this book from cover to cover and apply its lessons to his own experiences.

Chas. E. McLennan, M.D.

* * *

CARDIOVASCULAR DISEASES — Third Edition—Revised and enlarged—David Scherf, M.D., F.A.C.P., Professor of Clinical Medicine, New York Medical College, and Linn J. Boyd, M.D., F.A.C.P., Professor and Director of Medicine, New York Medical College. Grune & Stratton, Inc., 381 Fourth Ave., New York, 1958. 829 pages, $17.75.

This textbook on cardiology, now in its third edition, attests to its popularity. The scope of the book has increased due to new discoveries and recent advances in therapy. The advantages of this text to the cardiologist are twofold: It has an excellent bibliography which includes many European references usually unavailable to American students because of the language barrier; and it is a concise, clinical outline in treatment of the various cardiological problems.

Why Do Females Live Longer?

It is difficult to explain sex differences in mortality and longevity. These differences are being widely publicized as expectation of life at birth in the United States approaches three score years and ten. Moreover, the United States population census of 1950 was the first one to reveal more females than males—a surplus now approaching two million. This surplus of women is more pronounced among the higher age groups. In fact, some demographers point to the prospect of "a nation of old ladies." Lower mortality among females increasingly offsets and counterbalances the excess of male births.

Expectation of life at birth is about 73 years for white females and only 67 years for white males; in 1940 the excess for females was only four years. Expectation of life at birth is a severely qualified forecast. Currently, 1,000 white girl babies born during the year would be expected to live a total of 73,000 years if their mortality during each successive year of life were the same as now prevails. Few demographers would care to predict that age-specific mortality rates will remain unchanged, even in the 21st century, until all of these 1,000 babies have died. Likewise, the statement that 1,000 white male babies can be expected to live a total of 67,000 years, or an average of 67 years, is based upon the continuation of current age-specific mortality rates during their entire lifetime.

Whether this sex differential in longevity increases or decreases or will be greater or smaller in 1975 than it was in 1950 is a matter for speculation. Explanations of the current difference of six years are far from complete. Natural scientists are forever reminding us that the female outlives the male in most species of the animal kingdom where the question of longevity has been carefully studied. Longer life of women has been attributed to lesser pressures of living. Whereas a man has to work under greater strains in a highly complex civilization, women are aided in the release from household duties by all manner of appliances. The mortality risks of childbearing are very minor today, as attested by the precipitous decline in maternal mortality rates. Women can devote more of their time to leisurely living, especially as their children grow older.

Two sociologists, Professor Vance and Father Madigan,[1] call this social explanation of sex mortality differentials sex differences in the "style of life." They tested this by comparing the mortality of American Catholic religious brothers and sisters, who face somewhat similar occupational hazards, do not have families, and in general are subject to somewhat similar pressures of living; that is, the differences between the sexes in the "style of life" were considered minor. These two investigators

(Continued on Page 70)

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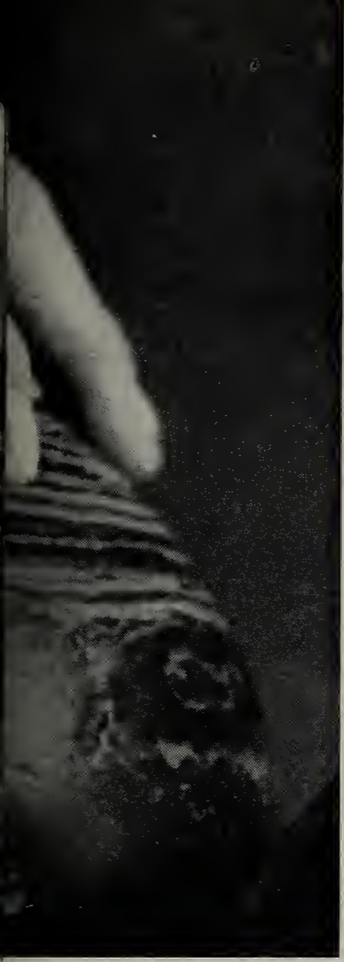

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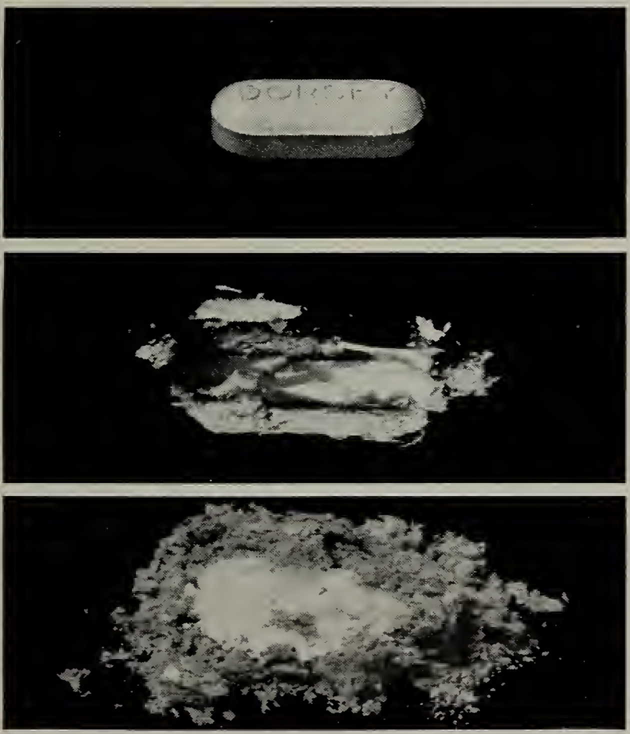

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Why Do Females Live Longer?

(Continued from Page 67)

reasoned that, if they found no sex differentials in mortality in this control group, the sex variations in the "style of life" could largely explain the lower mortality enjoyed by females generally in the United States. But the nuns (sisters) had lower mortality and lived longer than their male counterparts (brothers)! Expectation of life at birth in this control group was four years, or 10 per cent greater for the females than for the males. Since this excess of 10 per cent in length of life for females was matched by a similar difference of 10 per cent in favor of white females generally in the United States, the investigators concluded that "style of life" was not an explanation of lower mortality or longer life among females. Apparently the scientific explanations for longer life among females must be biological rather than social.

—*J.A.M.A., April 26, 1958*

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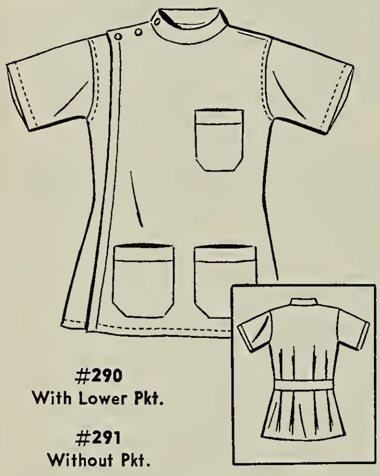

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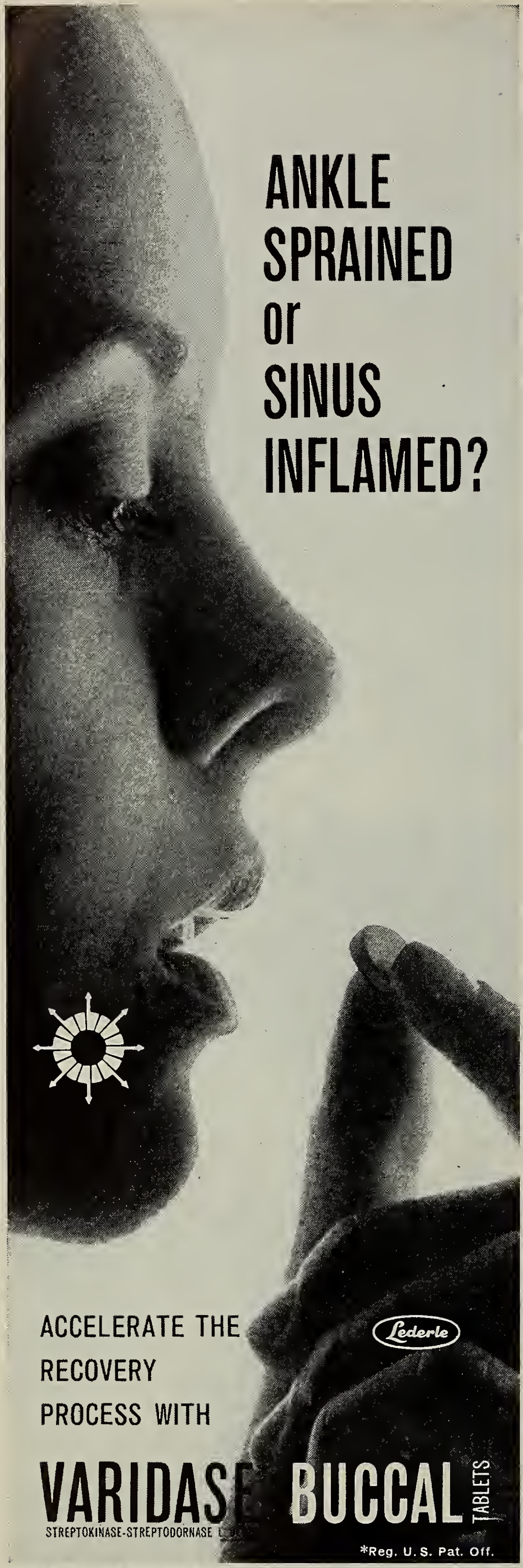
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Policy of American Hospital Association

The House of Delegates of the American Hospital Association, meeting in Chicago recently, adopted a statement of policy with respect to meeting the hospital needs of the aged. The statement, which supersedes all previous actions taken by the association, follows:

1. The American Hospital Association is convinced that retired aged persons face a pressing problem in financing their hospital care.

2. It believes that federal legislation will be necessary to solve the problem satisfactorily. It has, however, serious misgivings with respect to the use of compulsory health insurance for financing hospital care even for the retired aged.

3. It believes that all possible solutions must be vigorously explored, including methods by which the dangers inherent in the Social Security approach can be avoided.

4. It believes that every realistic effort should be made to meet the hospital needs of the retired aged principally through mechanisms utilizing existing systems of voluntary prepayment. However, it is conceivable that the use of Social Security to provide the mechanisms to assist in the solution of the problem of financing these needs may be necessary ultimately.

5. It believes that any legislation developed to provide for government participation to meet the hospital needs of the retired aged should be so devised as to strengthen the voluntary prepayment systems, and should conform to the following principles:

(a) Legislation designed to provide for the hospital needs of the retired aged should provide essential hospital services and should exclude custodial care provided for nonmedical reasons.

(b) Government participation should be restricted to persons over 65 who are not regularly and substantially employed. The voluntary prepayment system provides a satisfactory mechanism for the coverage of other persons, regardless of age.

(c) Any program in which the federal government participates to meet the hospital needs of the nonindigent aged should emphasize individual responsibility and make the application of a means test unnecessary for obtaining benefits.

(d) Such a program should be based on the service benefit principle and should provide benefits sufficiently comprehensive to remove the major economic barriers to hospital care for the retired aged.

(e) Such a program should make benefits available through non-profit prepayment plans.

(f) Hospitals should be paid fully for the cost of care rendered.

(g) Such a program should not provide services in facilities operated by the federal government.

(Continued on Page 85)

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Public's Hunger for Medical News Is Great

A monumental nationwide study, sponsored by the National Association of Science Writers and supported by a grant from the Rockefeller Foundation, strongly indicates that the American public has a big appetite for science news, especially medical.

But the surprising conclusion is that because of space limitations all "mass media are transmitting only a microscopic part of the mountainous supply of science information potentially available to them."

The study is entitled: "The Public Impact of Science in the Mass Media." It was conducted by the Survey Research Center, Institute for Social Research, University of Michigan.

The preface of the 250-page study, said that "the scientific journals of the world pour forth research papers at the rate of 20,000 a week. The science writer, as the middle man in the flow of communications, must select, condense and translate from this fantastic deluge of information those items he is to transmit to the lay audiences of the mass media. In economic terms, it is not supply but demand that is the problem in the transaction."

Much of the study, which deals with nine specific

(Continued on Page 100)

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How Safe Are 'Suntan Pills'?

The usefulness and safety of the new "suntan pills" have not been definitely proved, according to a report by the American Medical Association's Committee on Cosmetics.

In fact, there are many unanswered questions about the long range safety of the drug methoxsalen (Meloxine, Oxsoralen), according to a special committee report in the Aug. 23 issue of the *Journal of the American Medical Association.*

Methoxsalen, also known as 8-methoxypsoralen or 8-MOP, is a compound that has been used for several years to treat vitiligo, a condition in which areas of the skin are unpigmented. By giving the drug, followed by exposure to ultra-violet rays, pigment formation is induced in vitiligo. However, the authors of the report said the response of the skin is "erratic and unpredictable, and cosmetically satisfactory repigmentation can be obtained in only about one out of every seven patients treated."

Recently methoxsalen was suggested as a means of enhancing the tanning of normal skin and of reducing the skin's sensitivity to light. It is now available for these purposes in pill form on a prescription basis. Most investigators agree that the drug helps enhance tanning of normal skin and increases tolerance to light in sun-sensitive persons. But to achieve this tolerance, there must be a delicate balance between dosage of drug and sun, the physicians said. If the person gets too much of either, he may have a violent reaction.

Present experience indicates that most healthy adults might safely take 10 to 20 milligrams of methoxsalen by mouth for one to two weeks, Drs. Marion B. Sulzberger, New York, and Aaron B. Lerner, New Haven, Connecticut, said in the committee report. But its long term unsupervised use presents the following questions:

—Exactly how effective is the drug in increasing suntanning and tolerance to light?

—What will happen to the skin when courses of methoxsalen and sun exposure are repeated once or twice or oftener each year for many years and deeper than normal tan develops?

—Will it affect the incidence of skin cancer?

—Will the skin's aging process be delayed or accelerated?

—How will it affect persons with gastrointestinal disease, liver disease, or chronic infection?

In summary, an accompanying Journal editorial pointed out that any physician endorsing the use of methoxsalen for suntanning must realize that there are many unknowns, that there are dangers when many persons take an active drug for long periods without regular medical examination, and that the value of suntanning itself is questionable.

Dr. Sulzberger is on the staff of New York University Post-Graduate Medical School, and Dr. Lerner is a member of the staff of Yale University School of Medicine.

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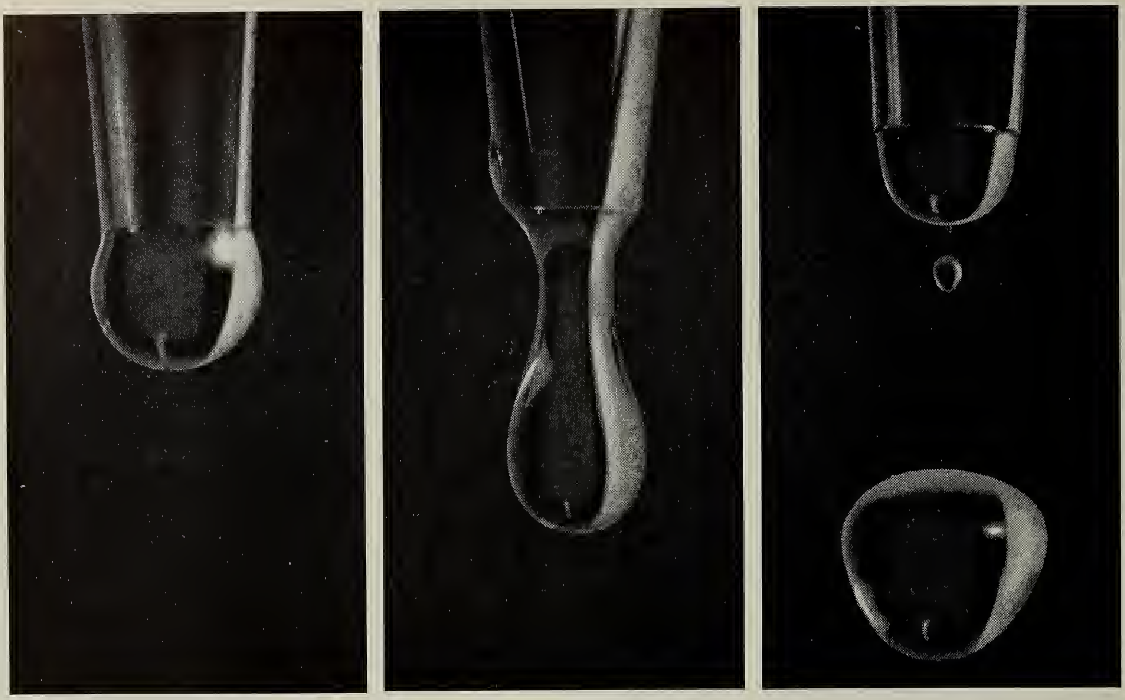

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(Continued from Front Advertising Section, Page 62)

which to base engineering decisions of the future."

Scientific advances have also been employed to protect our rights as citizens.

J. Edgar Hoover, director, Federal Bureau of Investigation, said "by adopting wherever possible the scientific approach which has been traditional with the medical profession, law enforcement has attained progressively greater heights of accomplishment."

Every scientific approach is employed to "help identify the guilty and free the falsely accused," he said.

Among these scientific approaches the FBI chief listed:

—practical adaptation of fingerprints as a means of positive identification.

—use of radar in detecting speeding violations.

—scientific tests to determine alcoholic content of the blood.

—use of the two-way radio and other electronic equipment.

The FBI laboratory, he said, "has gradually expanded, until today it uses substantially every field of science from anatomy to zoology."

The *Journal* articles also cite a number of other areas of mutual cooperation, including: Law, chemical industry, news communication, entertainment, insurance, aviation, agriculture, periodicals, and sports.

In summing up the freedom of enterprise and cooperation of medicine and industry, Roger M. Blough, chairman of the board, United States Steel, said, "this progress augurs well for the future and points to an increasingly close relationship between industry and medicine.

"We should see to it that such relationships carry full recognition of the dignity of the individual, and have as their single goal the health and well-being of industrial America."

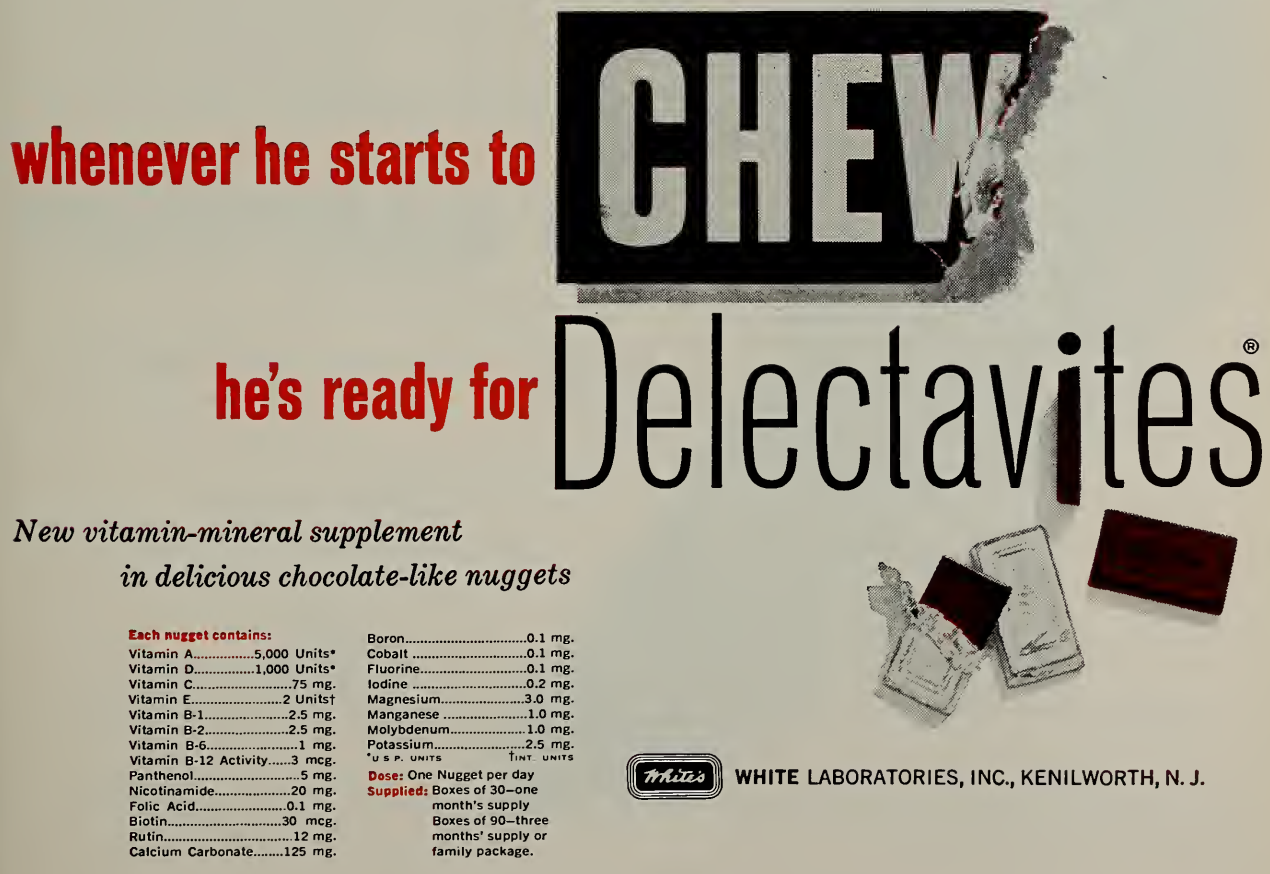
Policy of American Hospital Association

(Continued from Page 74)

(h) Such a program should provide reasonable criteria to determine the eligibility of hospitals to participate, but the federal government should be precluded from interfering in the administration and operation of hospitals providing the services.

(i) Such a program should maintain the free choice of doctor and hospital by the recipient.

(j) Such a program should permit and encourage continuous adaptation to new knowledge in the provision of services.



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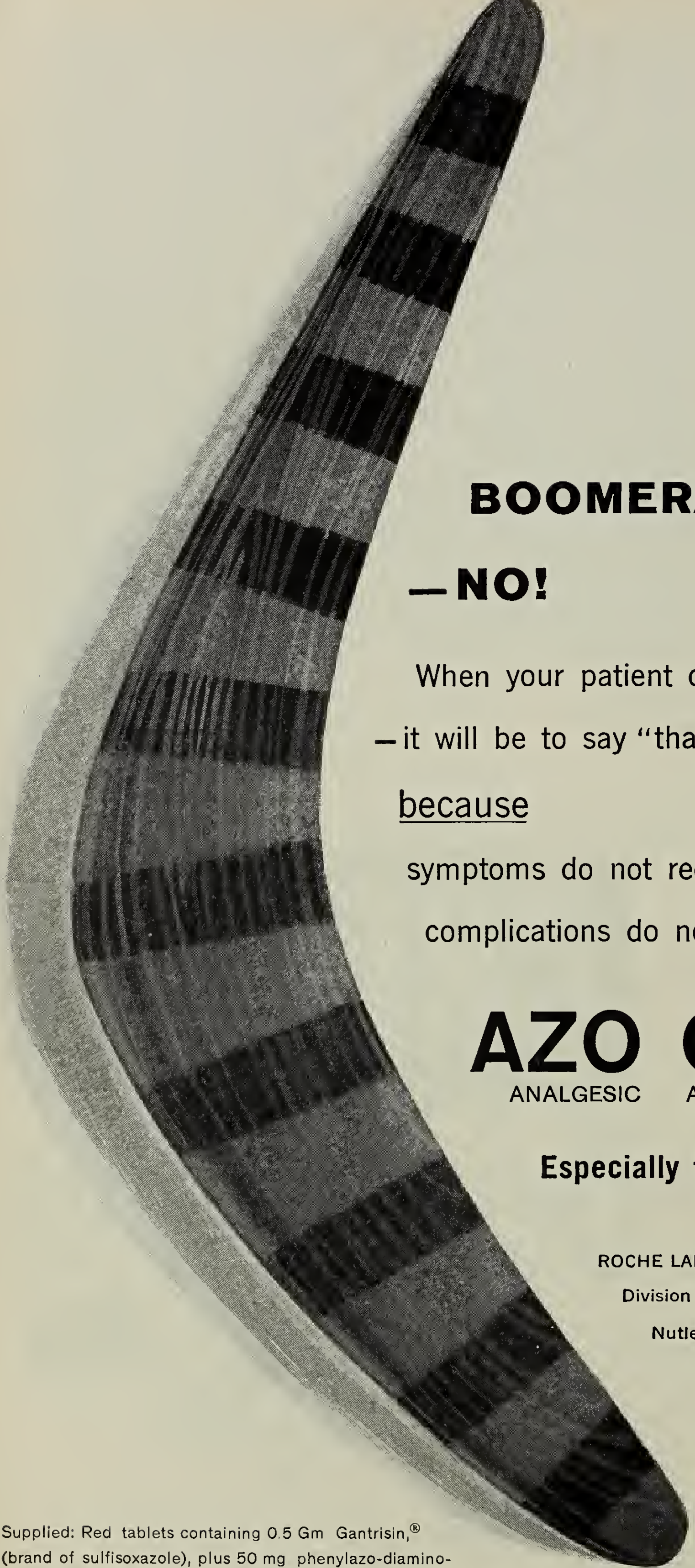

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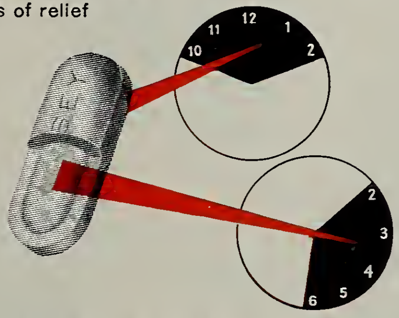

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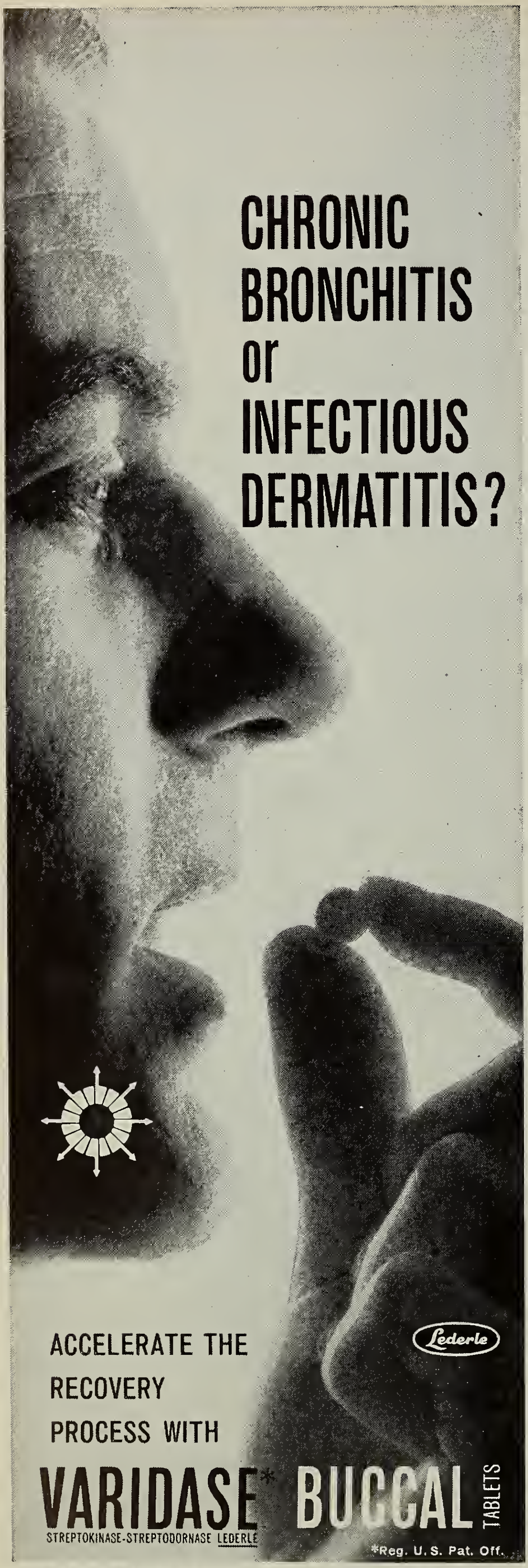

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Professional Training Urged For Physically Handicapped

The investment of relatively small sums of money in the rehabilitation of handicapped persons for professions really pays off, a recent Oklahoma survey has shown. In fact, professional workers in their working lifetimes will return to the state and federal government 60 times the amount of money invested in their rehabilitations. That is the estimate of the amount to be paid in taxes alone by 190 persons now working in medicine and related fields after their rehabilitation by the Oklahoma State Division of Vocational Rehabilitation.

Because some people think that only craft, custodial or service workers are produced by vocational rehabilitation services, Dr. Jean S. Felton, professor of preventive medicine at the University of Oklahoma School of Medicine, surveyed the Oklahoma program between 1937 and 1957. He found workers in many professions, but studied carefully only those in medicine and related fields.

The 190 handicapped persons were placed in 16 medical or paramedical categories. Fifty-two became nurses (professional and practical); 35 laboratory technicians; 18 dental technologists; 17 physicians and 14 x-ray technicians.

There were 26 different disabilities, the greatest number being stable pulmonary tuberculosis (22.1 per cent). Others were polio after effects, 13.2 per cent; bone and joint disorders, 10.5 per cent; and visual defects, 8.4 per cent. Of the former tuberculosis patients, 62 per cent became laboratory or x-ray technologists.

The overall cost—paid by tax funds—for rehabilitating the patients was $95,470, which averaged $533 per person, with a range from no cost to $5,282. Expenditures were made for training, physical examinations, prosthetic fees, doctors' fees, maintenance and supplies.

Not all clients represented direct costs, Dr. Felton said, since some received services, such as counseling, with no attached cost except overhead. The largest individual expenditure was for a patient who was assisted through medical school.

Dr. Felton estimated that the 190 persons would earn more than 34 million dollars from the time they completed training until they retired at 65. They would pay income taxes of more than 5 million dollars to the federal government and more than $170,000 to the state.

This represents "a return on rehabilitation investment of over sixty-fold," he noted. This return "bespeaks the wisdom of rendering aid to those persons capable of undertaking professional curriculums." In addition to producing financial gains, rehabilitation also helps fill needed occupational categories and, of course, helps restore the dignity of the individuals involved.

This study is reported in the August 7 issue of the *Journal of the American Medical Association.*

Alcohol Consumption Impairs Hearing

If you can't hear people at cocktail parties it may be due to the alcohol you're drinking.

Temporary impairment of hearing is one of the effects alcohol has on the body, according to a report in the August 30 issue of the *Journal of the American Medical Association.*

The report, by Rollo N. Harger, Ph.D., Indianapolis, is a chapter from a manual being prepared by the A.M.A. committee on medicolegal problems. The manual deals with medical and legal procedures involved in the use of chemical tests for intoxication.

In discussing hearing impairment, Dr. Harger mentioned a study showing that a higher tone intensity is necessary for a person to perceive a given tone or to differentiate between tones after he's been drinking. The difficulty arises because of the depressant effect of alcohol on the central nervous system. Most of the drug effects of alcohol are due to its presence in the brain, which it enters within seconds after it appears in the blood.

In addition to hearing impairment, other effects of alcohol resulting from its presence in the central nervous system are impairment of vision, clumsiness of voluntary muscles, and deterioration of judgment and self-control.

Alcohol also affects the skin, the stomach, heart and circulation, liver, and kidneys. Some of Dr. Harger's comments about these effects follow:

—Moderate doses of alcohol cause a marked dilation of skin blood vessels, resulting in a flushed face. However, in alcoholic coma, the impaired circulation causes a pallor of the skin.

—One researcher has shown that the incidence of vomiting is practically the same after intravenous administration of alcohol as after drinking. Thus it appears that the vomiting effect originates in the central nervous system and not in the stomach.

—It appears that alcohol has very little effect in the gastrointestinal tract beyond the stomach. The stomach reacts to alcohol with a change in the amount of gastric juice secreted.

—With small amounts of alcohol there seems to be a temporary rise in pulse rate, blood pressure, and total blood flow. However, these effects are mild compared to the action of many circulatory stimulants. Temporary impairment of the liver's ability to break down sugar has been found to follow the ingestion of alcohol.

—It appears unlikely that the moderate use of alcohol produces any kidney damage. The increased volume of urine after consumption of alcoholic beverages is due to the augmented water intake and to the marked diuretic effect of alcohol. Alcohol allows increased water loss by the body because it inhibits the production of a pituitary gland hormone. This hormone normally prevents the loss of excessive amounts of fluid by the body.

Dr. Harger is professor of biochemistry and toxicology, Indiana University School of Medicine.

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BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE *are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.*

BACTERIAL AND MYCOTIC INFECTIONS OF MAN, Edited by Rene J. Dubos, Ph.D., The Rockefeller Institute. Third Edition. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1958. 820 pages, with 116 illustrations, $8.50.

BELL, SIR CHARLES—His Life and Times—Sir Gordon Gordon-Taylor, K.B.E., C.B., F.R.C.S.; Honorary Consultant Surgeon to the Middlesex Hospital, and E. W. Walls, M.D., Ch.B., B.Sc., F.R.S. (Ed.) ; S. A. Courtauld Professor of Anatomy in the University of London at the Middlesex Hospital Medical School. The Williams & Wilkins Co., Baltimore, Maryland, exclusive U. S. agents for E. & S. Livingstone Ltd., Edinburgh and London, 1958. 288 pages, $8.50.

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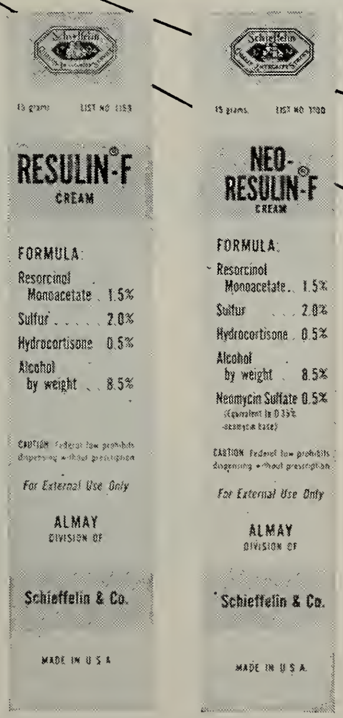
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Public's Hunger for Medical News Is Great

(Continued from Page 78)

objectives, was concerned with medical news and the reading public.

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—The west leads in the percentage who read all medicine, and the south and northeast trail.

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—Almost one third of the newspaper audience wants more science news, and almost one half wants more medical news.

—The science consumer prefers to receive science and general news via the written media.

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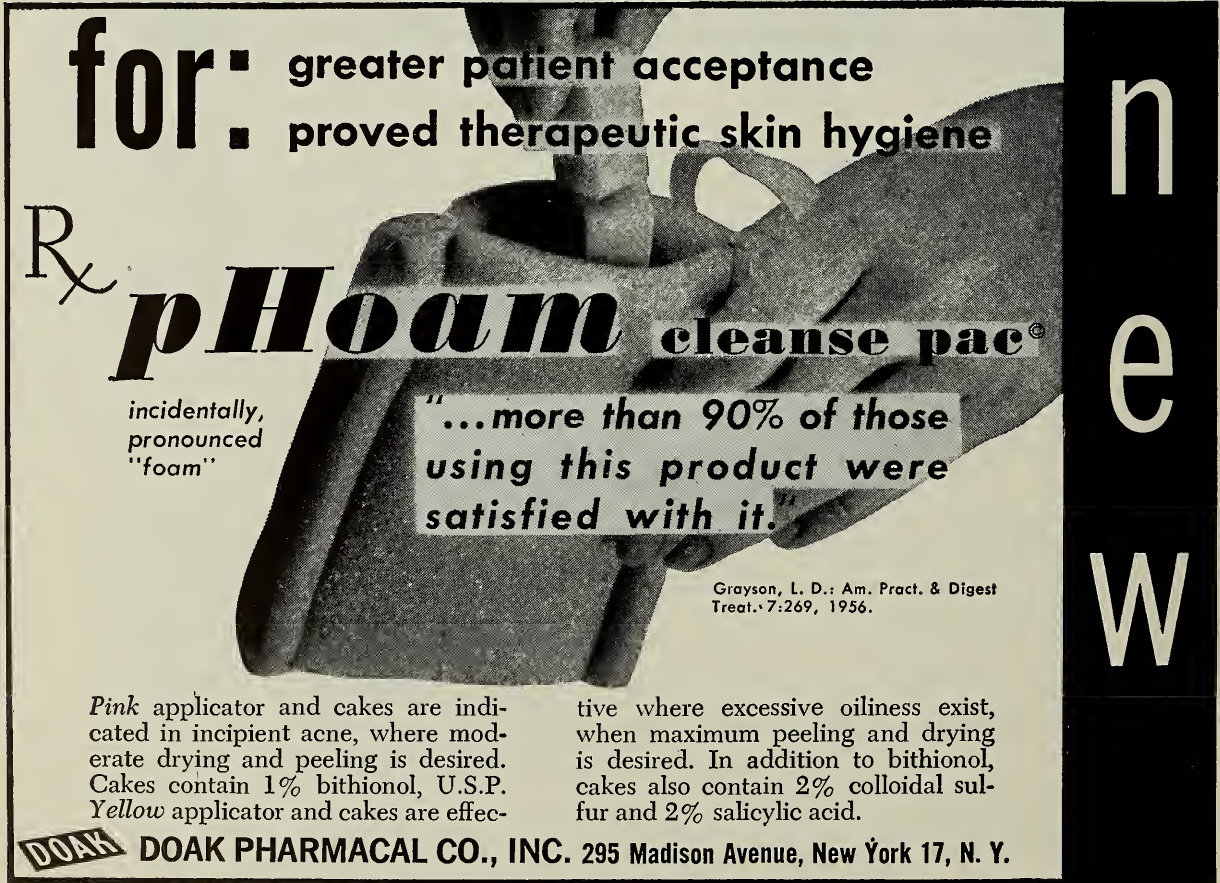

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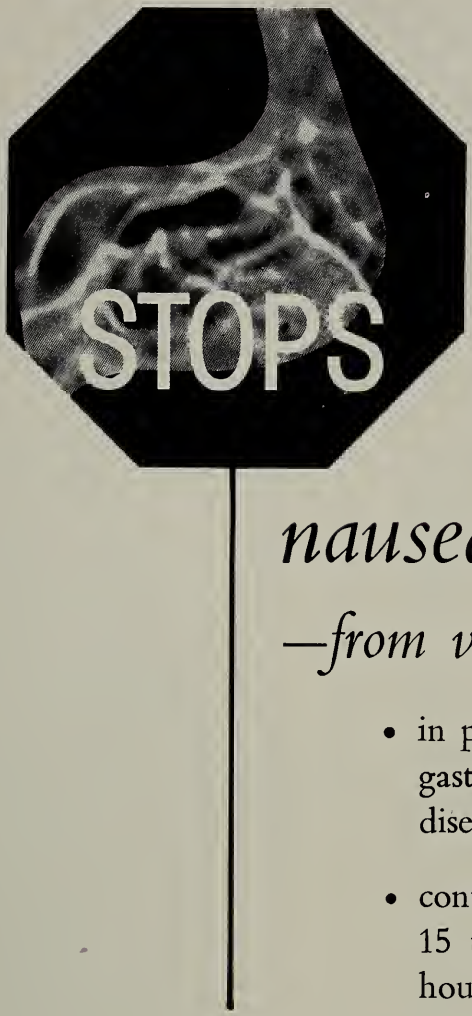

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Hip Bursitis

Pain in the lower back and legs may actually be "bursitis of the hip" and not sciatica, according to a Texas orthopedist.

The condition, medically called the trochanteric syndrome, may be treated in the same way as bursitis of the shoulder, Dr. Morton H. Leonard, El Paso, said in the September 13 issue of the *Journal of the American Medical Association.*

As in shoulder bursitis, the usual cause of the trochanteric syndrome is the wear and tear of everyday use, Dr. Leonard said. It is not so common or so well known as bursitis of the shoulder.

The onset is frequently sudden, with pain on the side of the hip extending down the back and side of the thigh. Pain may be referred to the lower back. Local tenderness in the region is constant. If there are calcium deposits in the area, a low-grade fever may occur.

Treatment may include x-ray therapy, diathermy, puncture of the affected bursa, and surgical removal of calcium. Dr. Leonard has also found that injections of the steroid hydrocortisone acetate into the affected part also helps.

New Guide to Measure Visual Impairment

A set of uniform standards for measuring visual loss and its effect on a person's ability to perform daily activities has been published by the American Medical Association.

For years physicians and laymen have tried to answer the questions: How does a visual deficiency influence a person's ability to live a normal life? How can the degree of impairment of this ability be measured?

The new guide "seeks to provide a simplified method for determining visual impairment and the extent of its effects on an individual's ability to perform the activities of daily living," according to an editorial in the September 27 issue of the *Journal of the American Medical Association,* in which the guide appeared.

It is the second one prepared by the American Medical Association Committee on Medical Rating of Physical Impairment. The first, published in February, dealt with the back and extremities. Others will deal with the cardiovascular system, respiratory conditions, and other body systems.

The editorial explained that diminished visual ability is expressed as a percentage of impairment of the visual system and as a percentage of impairment of the "whole man." Using these values, the physician has a practical means for expressing and calculating the extent of permanent impairment.

The physician's responsibility is to evaluate a patient's impairment—not his disability. Impairment is a purely medical condition and is the basic consideration in evaluation of permanent disability. Disability is defined as a situation in which a person's actual or presumed ability to engage in gainful activity is reduced or absent because of impairment.

The guide was prepared by the committee, which is headed by Dr. Raymond M. McKeown, Coos Bay, Oregon, with the assistance of three consultant ophthalmologists. They are Drs. Ralph W. Danielson, Denver; Charles E. Jaeckle, East Orange, New Jersey, and Harold G. Scheie, Philadelphia.

Common House Plant Found To Cause Dermatitis

Some species of the popular house plant philodendron have found to cause a skin eruption similar to that produced by poison oak.

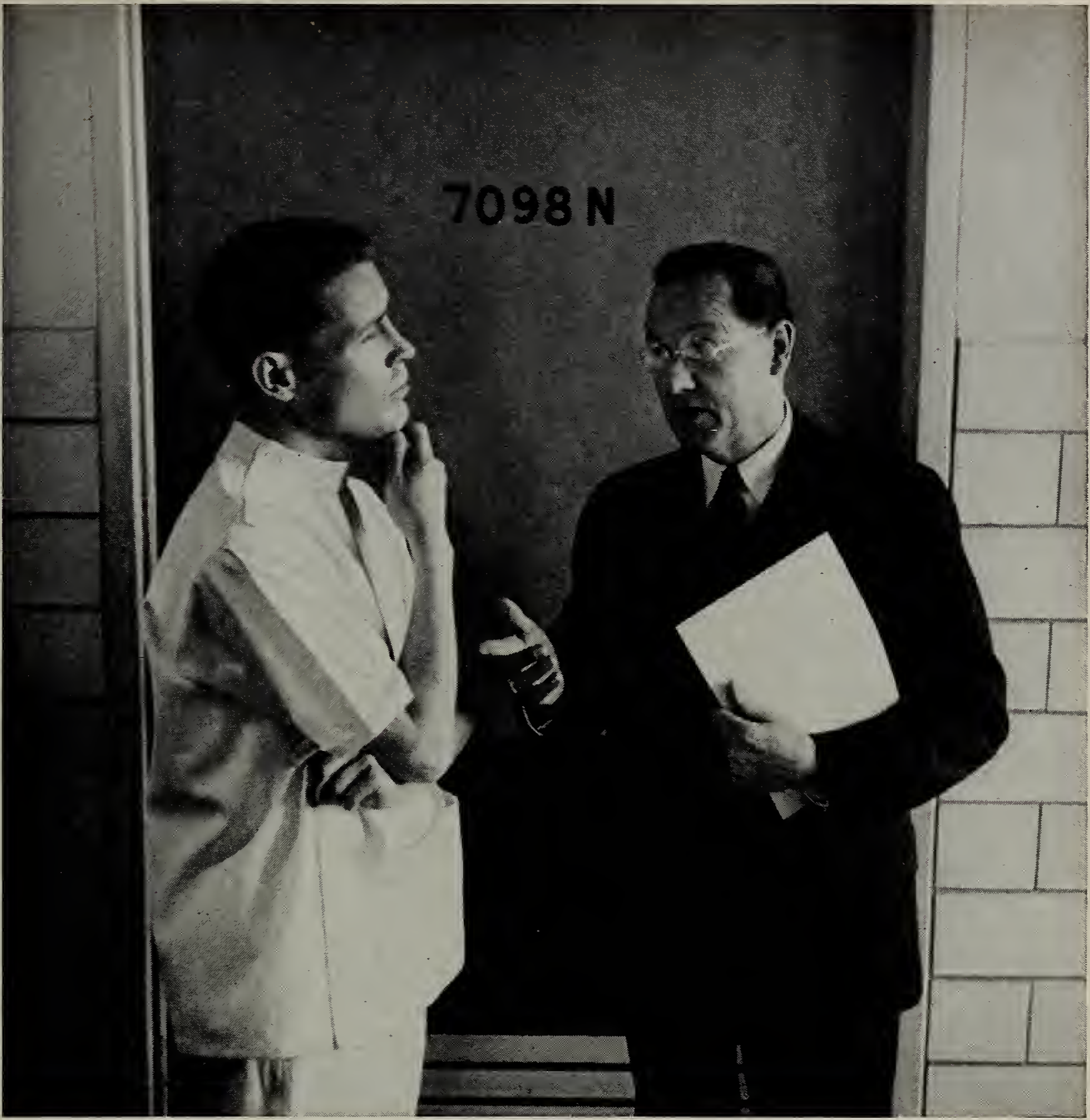
Writing in the September issue of *Archives of Dermatology*, published by the American Medical Association, two Los Angeles physicians said contact with philodendron leaves produces red blotches and streaks of tiny blisters. They usually occur on the hands and forearms, although they may occur other places.

The number of cases of dermatitis resulting from contact with philodendron is probably greater than generally thought, especially since philodendrons are increasing in popularity as house plants. The physicians have seen at least 12 cases of philodendron-caused dermatitis in the last few years. The medical literature mentions other cases.

There are approximately 100 species of the genus. The most popular as a house plant is *Philodendron cordatum*, a vine with small, heart-shaped glossy leaves. Another is *Philodendron selloum*, which has large divided leaves and grows in a mound. The genus belongs to a family different from that to which the poison oak and poison ivy plants belong, although the skin eruptions produced by the plants look alike.

The skin eruptions generally clear after the exposure to the plants is ended.

Authors of the article are Drs. Samuel Ayres Jr. and Samuel Ayres III.



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Blood Matching in Corneal Transplants

Matching the blood of persons donating and receiving corneas for eye surgery may solve one type of transplant failure, three Ohio researchers have theorized.

Writing in the September issue of *Archives of Ophthalmology*, published by the American Medical Association, they called on all eye surgeons to cooperate in a study to learn the effect of blood type incompatibility on the development of opacity in corneal transplants.

Healthy corneas are removed from persons who have volunteered to donate their eyes within a few hours after death. The corneas are stored in eye banks until being transplanted to persons blinded because of damaged corneas.

A large proportion of corneal grafts become opaque during the first months after surgery, the authors said. Some type of tissue intolerance has been suggested as causing the opacity to develop.

Dr. William H. Havener, Dr. George T. Stine, and Larry L. Weiss, B.A., of the Ohio State University department of ophthalmology, Columbus, think the intolerance might be a blood type incompatibility. When blood types don't match in transfusions, severe reactions occur.

To test their theory, the authors asked eye surgeons to keep records of the blood types of corneal donors and recipients and to submit them to the national committee of eye banks for study. Such a study could show the statistical relationship between corneal opacity and blood type incompatibility.

The authors studied 21 cases of corneal transplants in which the blood types of donor and recipient were known. Of 17 with compatible blood types, 14 remained clear. In none of the four cases with incompatible blood types did the corneas remain clear.

While the study is very small, "it is noteworthy that not a single incompatible donor cornea remained clear," they said.

Chance alone would result in compatible transplantations in two thirds of all cases chosen at random. This happens because almost half of all corneas would be from type O "universal donors" and could be given succesfully to persons of any blood type. Four fifths of the remaining corneas would be type A and would be compatible in 43 per cent of recipients, they said. The chances of accurate accidental matching of types B and AB donors and recipients are remote.

If it can be shown that blood type incompatibility does influence the development of opacity, then a system can be worked out to type donor and recipient blood. The proportion of "clear" corneal transplants should then rise.

The authors already have started in their operations to match type A donors and recipients, leaving type O corneas for use in persons with types O, AB, and B blood.

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Need for Polio Vaccination During Pregnancy

Polio vaccination during pregnancy is important because it serves two purposes: Combating the "extraordinary susceptibility" of pregnant women to the disease, and prolonging their infants' passive immunity.

These were the conclusions of five University of Minnesota researchers who studied 138 pregnant women. Their study is reported in the September 6 issue of the *Journal of the American Medical Association.*

More than 65 per cent of the women were found to be incompletely protected against the disease. After receiving two Salk vaccine shots during pregnancy, the proportion dropped to 18 per cent.

Before receiving the shots, 33.1 per cent showed immunity to all three polio viruses; 58.6 per cent to one or two types, and 8.3 per cent to none. After the shots 82 per cent were immune to all three types.

The study also indicated that vaccination during pregnancy lengthened immunity in newborn infants.

The authors explained that newborn infants are

(Continued on Page 38)

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Occupational Skin Diseases Can Be Prevented

Inflammation of the skin, the most common industrial disease, is largely preventable, according to the American Medical Association's committee on occupational dermatoses.

Lack of personal cleanliness is the most important factor in the development of occupational skin disease, the committee said in a report in the August 30 issue of the *Journal of the American Medical Association.* The committee is part of the A.M.A.'s Council on Industrial Health.

Most cases of acute occupational dermatitis occur in young and new workers who possibly are less careful and who often fail to observe suggested hygienic practices.

Contact with chemicals accounts for 90 per cent of all industrial skin diseases, the report said. Petroleum products and greases; alkalies, including cement, and solvents lead the list of causative agents.

Physical agents, such as exposure to sun or heat; mechanical injuries; biological agents, such as bacteria, and plant poisons also cause dermatitis.

Factors predisposing to occupational skin diseases are the condition of the skin itself and the conditions of the working environment, the report said.

Examples of how the skin may influence the development are: A person with blond or fair skin is more susceptible to light and heat injury than a person with darker skin. If a person has very oily skin and already has acne, the acne may be aggravated by exposure to oils. However, oily skin has greater tolerance for fat solvents, such as naphtha and turpentine.

The committee recommended several things that can be done in the working environment to limit the development of dermatitis.

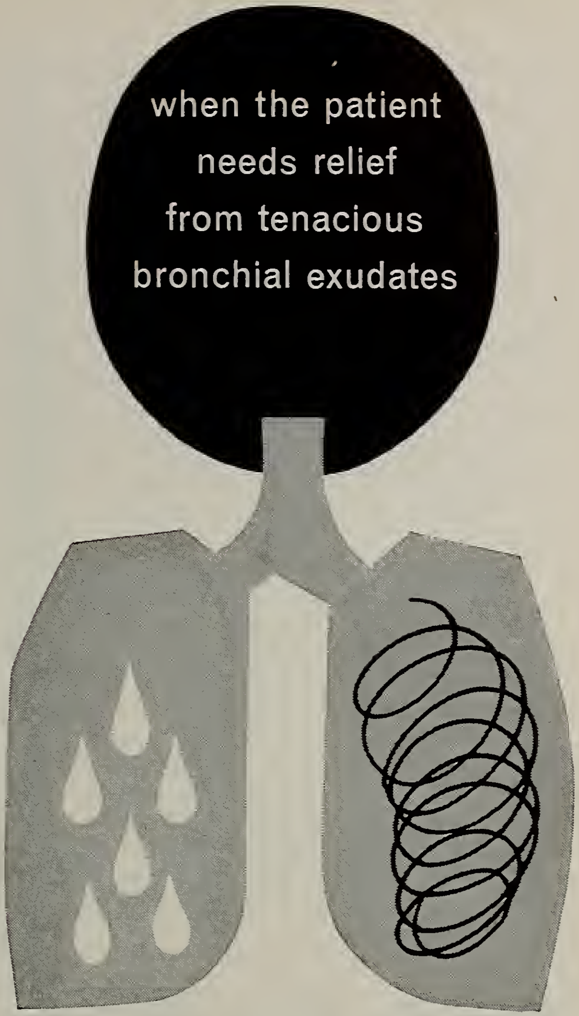
A clean and well-ventilated plant is more likely to be free of irritating and sensitizing substances, especially when noxious dusts, vapors, mists, or fumes are produced.

Conveniently located washing facilities and frequent and careful washing by the workers tend to prevent long contact with dermatitis-producing substances. Efficient and mild skin cleansers should be readily available, and showers for use after work may be necessary.

The committee also said that protective clothing should be worn. The difference that protective clothing can make is noticeable in hot weather when workers wear less clothing. The incidence of skin diseases rises.

When wearing gloves or other protective clothing is not practical, protective ointments or barrier creams may aid in skin protection. One of the chief

(Continued on Page 34)



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Prophenpyridamine maleate	12.5 mg.
Dihydrocodeinone bitartrate	1.66 mg.
Chloroform (approx.)	13.5 mg.
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Pastoral Counseling Service In Medical Center

A medical center outpatient service for persons needing religious counseling was described recently by two North Carolina ministers.

Richard K. Young, Th.D., and Benjamin S. Patrick, Th.M., Winston-Salem, reported on the outpatient pastoral counseling service at North Carolina Baptist Hospital in the September 6 issue of the *Journal of the American Medical Association.*

It is one more example of the growing cooperation between medicine and religion in helping persons who are ill or who need help in solving their daily problems.

Outpatient counseling at North Carolina Baptist Hospital resulted from a program of intensive pastoral work with inpatients. Many patients requested that the chaplain talk with members of their families. Many patients themselves returned for counseling after their discharge from the hospital, and eventually local pastors began sending their patients to the hospital chaplain.

In 1953 a program of outpatient counseling was set up. In that year there were 1,621 visits. By 1957 the number had grown to 3,208, and people were coming to the service from three states.

The staff consists of 13 men, all ministers. Six are permanent members and seven are fellows or interns. "These counselors function in their roles of ministers—but ministers with special training and experience in understanding human behavior." They deal with persons having typical problems of adjustment and make no attempt to handle cases of mental illness. When such patients appear, they are referred to the psychiatric clinic. Often such referrals are more easily made by chaplain-counselors than by local pastors, the authors noted.

Many problems are brought to the clinic. More than a third of the persons seen last year received marital counseling and many received "growth counseling"—growth in self-understanding.

The department looks on counseling as a religious process in which the individual is helped to realize more nearly the full potentials of his own personality, they said.

The outstanding advantage of a pastoral counseling service in a medical center is the availability of medical resources. If patients need medical care, they are referred to the medical departments. The medical staff and the chaplains realize that both play a part in the comprehensive care of the patient.

Another advantage is that counselors can be trained within the framework of interprofessional relationships. The medical and religious groups work closely together, exchanging information and learning from each other.

A promising development that has grown out of the North Carolina program is the opportunity for research. The hospital has employed a clinically trained minister to do research in pastoral care.

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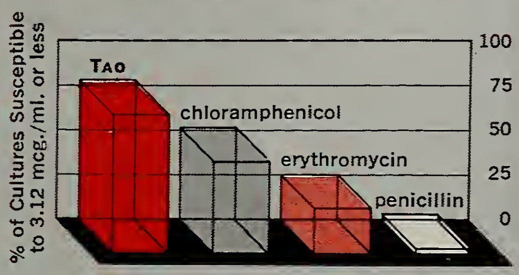
effective . . .

CLINICAL RESULTS	adults	children	all Staph infections
Cured	172 (80%)	148 (89%)	71 (88%)
Improved	28 (13%)	8 (5%)	7 (9%)
Failure	17 (7%)	11 (6%)	3 (3%)

Types of infecting organisms: The majority of identified etiologic microorganisms were Staph. aureus and Staph. albus. Tao has its greatest usefulness against organisms such as: staphylococci (including strains resistant to other antibiotics), streptococci (beta-hemolytic strains, alpha-hemolytic strains and enterococci), pneumococci, gonococci, Hemophilus influenzae.

even against resistant staph[1,2] . . .

Per cent of "antibiotic-resistant" epidemic staphylococci cultures susceptible to Tao, erythromycin, penicillin and chloramphenicol.[1]



well tolerated . . .

REACTIONS:

(a) adults	**(b) children**
Total—9.2% (20 out of 217)	Total—0.6% (1 out of 167)
Skin rash—1.4% (3 out of 217)	Skin rash—none
Gastrointestinal—7.8% (17 out of 217)	Gastrointestinal—0.6% (1 out of 167)

There was complete freedom from adverse reactions in 94.5% of all patients. Side effects in the other 5.5% were usually mild and seldom required discontinuance of therapy.

plus . . . stability in gastric acid • rapid, high and sustained blood levels • high urinary concentrations • outstanding palatability in a liquid preparation.

Dosage and Administration: Dosage varies according to the severity of the infection. For adults, the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. For children 8 months to 8 years of age, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since Tao is therapeutically stable in gastric acid, it may be administered at any time, without regard to meals.

Supplied: Tao Capsules—250 mg. and 125 mg.; bottles of 60. Tao for Oral Suspension—1.5 Gm.; 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. English, A. R., and Fink, F. C.: Antibiotics & Chemother. (Aug.) 1958. 2. English, A. R., and McBride, T. J.: Antibiotics & Chemother. (Aug.) 1958. 3. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy (Aug.) 1958. 4. Celmer, W. D., et al.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 476.

Blood Group-Disease Studies Criticized

Many of the studies showing an association between blood types and certain diseases were based on faulty methods of study, a Swiss physician said recently.

Writing in the August 23 issue of the *Journal of the American Medical Association,* Dr. S. Alexandre Manuila, Geneva, said that judgment about such relationships should be reserved until more trustworthy evidence is available.

A number of studies in Europe and the United States have indicated relationships between blood types A, B and O and certain diseases—stomach cancer, duodenal and gastric ulcer, diabetes mellitus, pernicious anemia, bronchopneumonia, toxemia of pregnancy, and others. For instance, one study indicated that stomach cancer was more common among persons with group A blood than with other types.

Dr. Manuila believes that many of these studies are inaccurate because insufficient numbers of persons were studied; no efforts were made to standardize the ethnic and racial backgrounds of comparative groups; errors occurred in blood typing, and errors were made in the statistical studies.

Valid information about any relationship between disease and blood type can be obtained only if more attention is given to sound methods of study, Dr. Manuila said.

He suggested that caution must be exercised to insure that samples are reasonably comparable in ethnic make-up. There must be greater awareness of the size of the margin of error to be expected in these studies. Also the combination of two or more small series into one large sample must be rejected, since there can be no valid control group with which such samples can be compared.

Dr. Manuila is associated with the Institute of Anthropology at the University of Geneva.

Occupational Skin Diseases Can Be Prevented

(Continued from Page 25)

values, the committee said, of a protective cream is that the worker is more apt to remove it and any accumulated irritant by washing before eating and after work.

Medical treatment should be available when a worker develops a dermatitis. However, the committee warned against overtreating—and thereby aggravating—a disease. Many conditions quickly respond to simple treatment such as wet dressings and calamine lotion, along with control of the exposure.

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Need for Polio Vaccination During Pregnancy

(Continued from Page 18)

resistant to certain diseases as a result of receiving antibodies from a mother who has been immunized by natural infection or previous vaccination.

The duration of immunity depends on the amount of antibody present. The higher the antibody level, the longer the immunity lasts. By vaccinating the mother, her own antibody level—and her infant's—is raised.

The study showed that the infants eliminated about half of the polio antibodies received at birth within five weeks. The length of immunity resulting from the remaining antibodies depended on the original antibody level. Some infants still showed some immunity at nine and 12 months of age.

The authors are Dr. Mauricio Martins da Silva, Dr. Konald A. Prem, Eugene A. Johnson, Ph.D., Dr. John L. McKelvey, and Dr. Jerome T. Syverton of the University of Minnesota Medical School, Minneapolis.

On any given day, one in every seven men and women aged 65 or more is disabled.—*National Health Education Committee, Inc.*

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  American Board Review Course, Two Weeks, April 6
  Blood Vessel Surgery, One Week, March 2

GYNECOLOGY & OBSTETRICS—
  Office & Operative Gynecology, Two Weeks, February 9
  Vaginal Approach to Pelvic Surgery, One Week, November 17, February 2
  General & Surgical Obstetrics, Two Weeks, February 23

MEDICINE—Electrocardiography, Two-Week Basic Course, March 16
  Gastroscopy & Gastroenterology, Two Weeks, March 2
  Board Review Course, One Week, April 20

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Food Faddists Claims Refuted

Americans actually have to go out of their way to avoid being well nourished.

Yet thousands of food supplement salesmen are trying to convince people that improper diet is to blame for most disease and that it can be cured by taking food supplements.

The food supplement business is a multi-million dollar one. It could be considered a "mildly amusing confidence game" except that it is also highly dangerous, according to an article in the September issue of *Today's Health*, an American Medical Association publication.

It is dangerous because persons with serious ailments neglect proper medical treatment in the hope that they can find "a cure in a capsule."

Food supplements are pills, powders, pellets or capsules that often contain vitamins and minerals, usually in amounts far greater than the body needs, and some "mysterious ingredient" that is usually nothing more than a combination of dehydrated vegetables and plants.

The seven most popular pitches used by the self-styled "nutritional advisers" in selling their supplements are outlined—and refuted—by Joseph N. Bell, Chicago, in the referenced article, which is part of a campaign being conducted by the American Medical Association, the Food and Drug Administration, and the National Better Business Bureau to combat food faddism.

The pitches are:

—Most disease is due to improper diet. The fact: There are a few diseases caused by dietary deficiencies, but they are rarely found in the United States. By patronizing all departments of a grocery store, a person can easily supply all of his nutritional needs.

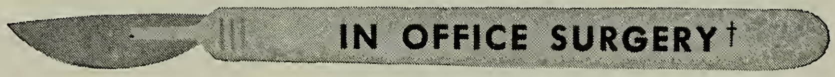
—Soil depletion causes malnutrition. The fact: The composition of the soil has very little effect on the composition of plants grown on it. If certain soil elements are missing, the plants simply don't grow.

—Chemical fertilizers poison the land and the crops grown on it. The fact: Extensive government research has shown that the nutritional value of crops is not significantly affected by the soil or the fertilizers used.

—Wonder power of wonder foods, such as 100 per cent whole grains—cereals, flours, bread and crackers; honey; maple syrup; blackstrap molasses, or raw vegetables. The fact: These are good foods, but they are not wonder foods and do not supply any miracle nutrients.

—Certain types of cooking utensils, especially aluminum, are harmful to foods. The fact: The

(Continued on Page 50)



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ATARAX ***is anti-arrhythmic.*** In addition to producing tranquilization, ATARAX "restored and then maintained normal sinus rhythm" in 30 patients with cardiac arrhythmias. Most had been refractory to standard measures.[1]

IN ALLERGIC REACTIONS

ATARAX ***is antihistaminic, antiserotonin.*** Tranquilizers usually have an equivocal effect on allergic disease; ATARAX appears to be the exception.[2] Feinberg reports "striking results" in 15 out of 17 patients with chronic urticaria that cannot be attributed to calming action alone.[2] To date, over 649 cases of allergic dermatoses have responded favorably to ATARAX.[3,4]

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ATARAX ***is antisecretory,[5] antispasmodic,[6] and antitensive.*** Both emotional and physical aspects of gastric disorders are controlled by ATARAX. Treatment of peptic ulcer, epigastralgia, aerophagia with painful eructations, and colic of spastic origin, has yielded promising results.[5,6]

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SUPPLIED: Prescription only. *Tablets*, 10 mg., 25 mg., and 100 mg., bottles of 100. *Syrup*, pint bottles. *Parenteral Solution*, 10 cc. multiple-dose vials.

1. Burrell, Z. L., et al.: Am. J. Cardiol. *1*:624 (May) 1958. 2. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 3. Eisenberg, B. D.: Clin. Med. *5*:897 (July) 1958. 4. Robinson, H. M., Jr., et al.: South. M. J. *50*:1285 (Oct.) 1957. 5. Strub, I. H.: Personal communication. 6. Schuller, B.: Gaz. des Hôpitaux No. *10*:391 (Apr. 10) 1957.

ROERIG NEW YORK 17, N. Y. | DIVISION, CHAS. PFIZER & CO., INC. SCIENCE FOR THE WORLD'S WELL-BEING

Food Faddists Claims Refuted

(Continued from Page 42)

United States Public Health Service says hospitals the country over use aluminum cooking utensils. They certainly would not if research had given the slightest suspicion of danger from it.

—Processing removes nutritional values from food. The fact: Modern processed foods actually contain more nutrients than the same foods prepared by home cooking methods. Fruits and vegetables are canned or frozen at the peak of nutritional perfection, and flour, bread, milk and margarine are all improved in processing to supply known dietary requirements.

—Subclinical deficiencies are a constant danger. The fact: This statement has no meaning. Subclinical means without symptoms. Normal tiredness or "a worn out feeling" is said by the peddler to be a subclinical deficiency. If such feelings persist, a competent physician should be seen. They may be the forerunner of serious disease.

In conclusion Bell said, "If you suspect a diet deficiency don't let quacks prescribe for you. Consult your physician. . . . Eat sensibly, eat intelligently, eat economically—and for goodness sake, eat FOOD."

"Children now love luxury, have bad manners, contempt for authority, show disrespect for their elders, and love chatter in place of exercise. Children are now tyrants, not the servants of their households. They no longer rise when elders enter the room. They contradict their parents, chatter before company, gobble up their dainties at table, cross their legs and tyrannize over their teachers."—*Socrates* (467-400 B. C.).

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Prolonged Pulling of Hair May Produce Baldness

Prolonged pulling of the hair upward and backward—as in a pony tail—may produce baldness, an Illinois dermatologist warned today.

It can generally be cured by changing the hair style, Dr. Albert H. Slepyan, Highland Park, Illinois, said in the September issue of *Archives of Dermatology*, published by the American Medical Association.

Dr. Slepyan knows of 24 cases of baldness occurring in young girls wearing pony tails during the last two years. The baldness occurred along the side of the head, the back of the neck, and the part—anywhere there was a constant pulling. Dr. Slepyan named the condition 'traction alopecia."

The earliest sign is a mild redness about the hair follicles receiving the greatest traction or pull. Occasionally scaling occurs. After several months, occasional hairs are missing, giving a "plucked" look.

"In well-established cases, matchhead- to fingernail-sized oval or linear areas of baldness were seen radiating in the direction of the point of traction," he said. If the part was involved, it appeared irregularly widened by the absent hairs.

Among the 24 patients, only two showed any signs of baldness six months after they changed their hair style. One of these patients had worn her pony tail for about 15 months before the first signs of baldness appeared and the other for three years. Among the other patients the earliest signs of alopecia occurred after three months.

Dr. Slepyan is clinical associate professor of dermatology at the University of Illinois College of Medicine.

New Device "Reads" for Blind

Veterans Administration reports it has developed a device that will permit blind persons to "read" from ordinary books and magazines. The instrument, about the size and shape of a portable radio, focuses a light beam on the printing, which produces a pattern of musical chords. The blind person is trained to interpret these sounds as letters and words. VA says a reading speed of between 15 and 30 words per minute is possible. Only five models have been built, and quantity production will be delayed until the device has been further developed. The major advantage of this machine over Braille is that, being able to "read" normal print, the blind person can read business correspondence, carry on certain types of office work, and be less restricted in schooling.

—*A.M.A. Washington Letter*

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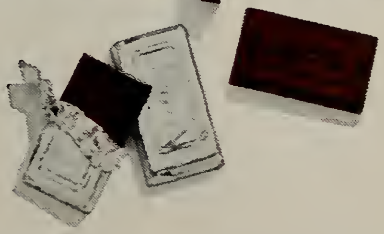

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Vitamin B-6	1 mg.
Vitamin B-12 Activity	3 mcg.
Panthenol	5 mg.
Nicotinamide	20 mg.
Folic Acid	0.1 mg.
Biotin	30 mcg.
Rutin	12 mg.
Calcium Carbonate	125 mg.
Boron	0.1 mg.
Cobalt	0.1 mg.
Fluorine	0.1 mg.
Iodine	0.2 mg.
Magnesium	3.0 mg.
Manganese	1.0 mg.
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Potassium	2.5 mg.

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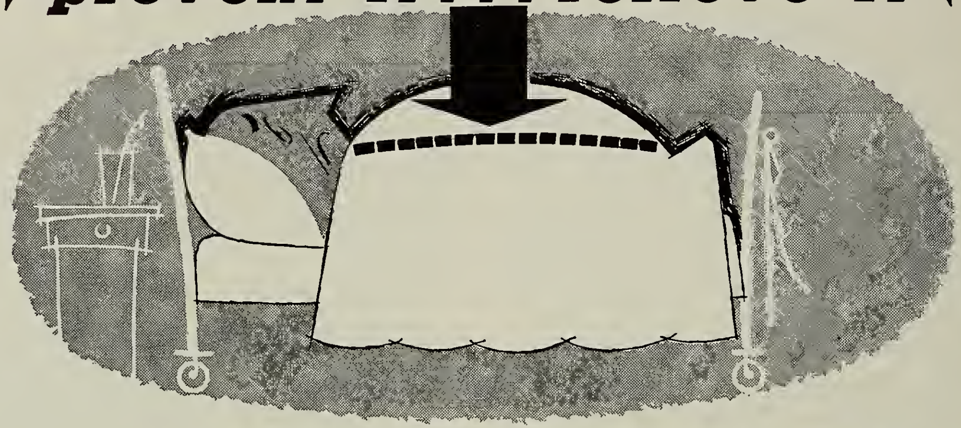

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Proven in research

1. Highest tetracycline serum levels
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And now in practice

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glucosamine-potentiated tetracycline with nystatin

antibacterial plus added protection against monilial superinfection

CAPSULES (black and pink) 250 mg. Cosa-Tetracyn (with 250,000 u. nystatin)

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A5475

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Why People Bought Life Insurance

A recent survey of members of 3,000 spending units sampled in a continuing study by the Survey Research Center of the University of Michigan in cooperation with the Board of Governors of the Federal Reserve System indicates that life insurance is purchased for many reasons.[1] Whereas only 12 per cent mentioned insurance as a good method of saving, 35 per cent gave as one reason for paying premiums the establishment of a "clean-up" fund to pay outstanding bills, debts, and funeral expenses. Provision for paying the costs of the last illness is given by life insurance salesmen as one of the major reasons for buying life insurance, and this survey of persons who had purchased life insurance and continued to pay premiums thereon verifies the appeal of this familiar sales argument.

The rapid growth of voluntary health insurance has tended to obscure this time-honored role of life insurance in defraying the costs of the last illness. More than one billion dollars a year is paid out by life insurance companies for death claims of persons aged 65 and over, the age group which experiences the highest mortality rates. The funds made available through life insurance for paying medical and hospital debts for the last illness are just as useful to the surviving members of the family as are the payments made under health insurance policies. One cannot, of course, know which illness or accident will be the last, but the last one is typically the most expensive. This survey also indicates that the proportion of persons in the age group 65 and over owning life insurance increased from 52 per cent in 1950 to 56 per cent in 1956.

Whereas only 18 per cent of the spending units with incomes of $7,500 or more mentioned the provision of a "clean-up" fund as one of the basic reasons for purchasing insurance, 65 per cent of those with earnings of less than $2,000 a year were motivated in part by the desire to provide such a fund. Moreover, it is likely that many respondents who gave "to provide for dependents" as one of the reasons for buying life insurance could have had in mind the advantage to dependents of providing for the payment of debts outstanding at the time of death.

—*J.A.M.A., June 14, 1958*

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Nineteen fifty-seven was the seventh successive year that the total number of live births increased. —*The Registrar, January 1958.*

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The Use of Ataractic Agents

Some Psychiatric Implications

WILLIAM F. FRY, JR., *M.D.*, Menlo Park

• Physicians should understand the psychic as well as the chemical effects of ataractic drugs, especially since they are prescribed chiefly for illnesses of emotional origin. The patient may feel that he is "being put off with a pill;" on the other hand, both patient and physician may be encouraged (and thus able to work better together) because the prescription of a drug represents "doing something" about the disorder.

This ability to "do something" may tempt the physician to resort too readily to relieve normal and even healthful tensions of living.

If the drug has pronounced physical effects (especially side effects), the patient may resent the prescription as an aggression; this danger is great if his emotional problem stems from oral and nutritional conflicts of childhood.

One of every three prescriptions filled in the United States, according to a recent estimate, is for an ataractic drug. The prescribing physician is well supplied—not to say deluged—with information on the chemical nature of these drugs and on the emotional changes produced by the chemical action of them. The potency of such agents, however, is not limited to the chemical effect; other, more obscure effects are found in the patient's emotional reaction to the very fact of receiving orally a tranquilizing drug. In certain circumstances these latter effects are even more powerful than the chemical action, and these too the physician must understand more than superficially if therapy is to do more good than harm.

That the administration of medicine in itself affects the patient has been widely accepted by the medical profession for many centuries. The empiric use of placebos attests this knowledge, and recent studies have attempted to evaluate the placebo effect more scientifically.[2,15] Another element is the personal administration of the drug by the physician,[3] a time-honored tradition whose importance was frequently stressed by Osler. The complex and intense physician-patient relationship is recognized as significantly coloring the patient's response.

Little can be said in a general way about placebo response or the physician-patient relationship that would be surprising to the practicing physician, who deals with these two factors many times every day. However, the opportunity afforded to the psychiatrist, who works with patients on a deeper level of psychic function, has contributed other information of value about emotional reaction to the use of oral ataractic agents.

SIGNIFICANCE OF THE PHYSICIAN'S PRESCRIPTION

Modern psychiatry accepts as a basic tenet the loneliness and social alienation of the emotionally ill person. Sullivan[12] wrote, "—a person with cus-

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From the Department of Ethnology, Veterans Administration Hospital, Palo Alto, and the Department of Anthropology, Stanford University. This study was made during the process of research financed by the Josiah Macy, Jr., Foundation.

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tomarily low self-esteem has some form or degree of social isolation—that is, some degree of limitations or stipulations on his contact with others." Contact with a respected physician may be a valued exception in a life which has seemed to become, under the cloud of emotional difficulty, an otherwise empty one. The acts of this physician—particularly those which may symbolize his professional attention and power—will come to have unexpected meanings to an isolated, deprived patient. Baker and Thorpe,[2] for example, suggested that the administration of a sweet-tasting placebo comes to represent the interest of a benevolent medical profession. Allen and Mackinnon[1] expanded on this theme: "It is a well-known fact that mentally ill patients will often respond favorably to increased attention and interest in them by those who are treating them." They recalled a legend about the famous French neurologist Charcot, who apparently produced clinical improvement in an emotionally ill patient merely by wiping the patient's nose with his own handkerchief. One of the active factors, they thought, is "the dependent gratification coming from the special attention given to the patient."

The author was made intensely aware of this influence during the process of an experimental study.[6] Patient enthusiasm for participation in the purely experimental work was explained in terms of drive for contact, through the experiment, with the medical profession.

The positive aspect of this interpersonal influence has been emphasized in the preceding paragraphs. There is also a negative side to the picture, illustrated by the following case report:

An 18-year-old college girl was complaining to her psychiatrist of her difficulty in studying for examinations. The patient's problems with regard to her study habits had been the subject of therapeutic investigation for several months already without much clinical improvement in this symptom. The psychiatrist, knowing that anxiety was one of the important elements involved in the symptom formation, decided upon the prescription of an ataractic agent for temporary relief of this anxiety during the critical examination period. Within moments of his proposing this prescription to his patient, he became acutely aware, through the patient's reaction, that he had made some sort of tactical error. After urging the patient to verbalize her reaction, the psychiatrist learned that he had communicated, by implication, a message quite different than that which he had intended. First, the patient had felt rejected. She had been "given a pill rather than understanding." She had been reminded of her mother's habit of popping an aspirin into her mouth when she complained, as a child, of feeling "badly," thereby effectively shutting off the patient's complaints for the time being and releasing the mother from any further responsibility for doing something about those factors which were causing her daughter's unhappiness. The psychiatrist also learned that the patient had interpreted his decision to prescribe the ataractic agent as evidence of his lack of faith in her personal interest in getting her problems worked out and as evidence of a deficiency of confidence in her ability to work them out. She also felt that the prescription implied a lack of respect for the important relationship between the psychiatrist and herself.

DYNAMIC IMPLICATIONS OF THE ATARACTIC AGENT

Another important aspect of the use of tranquilizers is that they are in the "miracle drug" category; their beneficial effect is novel, often rapid and definite. Moreover, they act in a group of disturbances which the physician has found most frustrating and discouraging—the psychosomatic diseases. By giving him a new hand-hold on emotional illness, tranquilizers have cheered the physician as well; he now feels that he can make a more personal investment in the welfare of his emotionally ill patient, take a more personal role in the struggle for relief.

A previous example of this effect of a drug was pointed out by Whitehorn and Betz[14] in the case of insulin therapy for psychosis, where the physician's feeling of being able to "do something" was crucial, these investigators believed, in the recovery of a statistically important number of patients. They observed, too, that the use of insulin affected the behavior of otherwise less therapeutically successful physicians, rendering them more like physicians who were otherwise more successful. The less successful physician seemed better able, when he used insulin, to enter into active personal transaction with his schizophrenic patient. The same increased confidence and enthusiasm may be expected in the practicing physician who approaches the emotional ills of his office or clinic patients with the added weapon of tranquilizers.

Patients and public also are aware of the existence of these drugs, and their attitude toward psychosomatic disease may be similarly altered, as in the case of a 30-year-old professional man who had severe psychoneurotic illness, manifested by phobias, anxiety, hypochondriasis and intermittent depression for 15 years before seeking medical relief of his symptoms. "I felt that the whole thing was hopeless, no one could help me," he explained. However, with the appearance of the many favorable reports on the tranquilizers, the patient began to feel more hopeful and made an active effort to obtain help for his problems. "It really didn't change anything for me but I thought that if a doctor tried to help me and things didn't go so well for a while, he could always give me some relief with one of those new medicines. . . . I was a lot more optimistic about my chances of getting something done for my sickness."

DANGERS OF ATARACTIC THERAPY

Despite this optimism, merely doing something to relieve symptoms may be dangerous if it satisfies the physician that he has done enough. As Grinker commented, in an interview,[8] "The physician's obligation in treating the sick without harming them involves not only the use of symptomatic remedies but an earnest search for primary causes and for rational measures to prevent or eradicate them. . . . We are doing a disservice to mankind when we as physicians lend ourselves to the prescribing of tranquilizers for the suppression of anxiety from the problems of child rearing, from the frustrations of the housewife's daily life, from the excitement over the canasta table. Frustration anxiety is necessary for learning, growth, and creativity."

In the same interview, Braceland[8] warned about the use of tranquilizers in the medical management of adolescent tensions. "I think a family doctor is smart to refuse to give tranquilizers in such cases. . . . The job is . . . not to quiet the symptoms and let the process go on underneath a tranquilizing drug." Meduna[8] agreed: "Adolescence is the age when you have to learn to be civilized—in other words, to be frustrated. . . . None of these things can be learned without suffering." Along the same line, Bourne[5] pointed out, "When the doctor offers and the patient accepts a drug for an emotional ailment, there may be a tacit agreement to avoid some disagreeable problem"—i.e., the physician's inability to understand the neurosis, the patient's unwillingness to have it explored.

Sarwer-Foner[10] has reported untoward psychologic results of the use of reserpine and chlorpromazine in the treatment of patients hospitalized because of neuroses. Several of these untoward reactions assumed psychotic proportions: (a) One group of patients consisted of men with unacceptable feminine identifications and passivity strivings and doubts about their unacceptable impulses, who "resorted to social, sexual, physical and/or intellectual activity as 'proof' of their manhood." The medication had the adverse effect for these men of "rendering a high level of muscular activity impossible. . . . Chemical interference with long-stabilized modes of expressions was produced. . . . Fear, anxiety, projective as well as autistic thinking, with dissociation of thought process, body image changes, and increased depression were produced." (b) A second group of patients were adversely affected by the interpretations they placed on the purely physical side-effects of the medication. Some regarded these effects as a "changing, or impairing, of their bodies;" others, as the fear of "loss of control over their impulses and their bodies." Symptoms "of depersonalization, marked anxiety, a feeling of strangeness as to their own bodies, paranoid distortions, or increased depression resulted." (c) "Depressed patients became more depressed and anxious." The effects of the drugs "reduced their already limited ability for interpersonal relations and, above all, for expressing aggression. This increased feelings of helplessness, worthlessness, and self-hatred." (d) "A significant number of patients . . . interpreted the effects of the drugs as an assault. . . . The marked and subjectively felt physiological effects of these powerful agents . . . resulted in immediate suspicion, and in the patient distorting the physician's motives for reducing him to this state."

Another danger in the ataractic drug lies in the use to which it may be put after it passes out of the physician's control. The physician may place the responsibility for administration of the drug in the hands of the patient himself, or he may designate the spouse as the dispenser of the drug. The doctor may thus find himself between the Scylla of the danger of patient-administered overdose and the Charybdis of introducing undesirable complications into an already difficult marital relationship. The latter problem arose in the case of a 30-year-old housewife. Because of the prominence of the patient's depression and a history of previous suicide attempts, the physician decided to place the responsibility for the dispensing of the medicine in the hands of the husband. The husband reacted to this responsibility by exaggerating it to a caricature. He locked the medicine in a strongbox and then locked the strongbox in the trunk of his car. It developed, in subsequent psychiatric treatment, that the pattern of interrelationship exemplified in this management of the medicine—the patient's passivity and the husband's combined hostility and withholding tendencies—was one of the basic disorders in this sick marriage. The physician, by making the husband responsible for the medication had unwittingly contributed to the perpetuation of the very illness his prescription was designed to ameliorate.

PSYCHOLOGICAL EFFECTS OF ORAL ADMINISTRATION

One of the few unfortunate consequences of the success of classic Freudian psychology has been the emphasis placed on the sexual aspects of human life. An even more fundamental aspect than sex has to do with the intake of nutrients. Evidence of this primacy comes from many sources—e.g., physiology, psychology, anthropology. Weakland wrote,[13] "Orality, in its broader sense, lately has been receiving increasing psychological attention, and its importance and pervasiveness in human thought and action are becoming more and more apparent." Weakland was able to demonstrate an undercurrent of concepts related to nutrient intake ("orality") throughout the "sexual" material he investigated. ". . . anthropological data . . . show . . . heterosexual activity being conceived of, quite clearly and consistently, in oral terms."

From this standpoint, the physician as a dispenser of comforting and healing medicines takes on the aspect of a good mother, feeding and supporting the patient-child; the oral medication easily becomes the symbol for the nutrient substance. Levine[9] commented, "Some physicians . . . know in a rather vague way that the giving of medicine to a patient has also a psychologic effect. . . . The psychologic effect is based in part on the fact that in many instances medicine is regarded as a gift from a friendly parent figure, as a sign of affection. In the deepest psychologic layer, the effect is in part based on the fact that medicine has linked with it some of the emotional qualities connected with mother's milk, that it produces some of the feelings of warmth and protection and security that are associated with being fed by a mother."

To the extent that this patient's identification of physician with parent and of medication with nutrient provides security and strength to the patient, it is valuable to treatment. It is axiomatic, however, that the patient who seeks assistance with emotional problems has suffered the misfortune of disturbed relations with his parents at some time during childhood. With the emotionally disturbed patient, the doctor finds himself becoming involved, in a very important way, in the old battles the patient has never stopped fighting inside himself with his parents of long ago. The prescription of oral medicine then becomes, in part, an invitation to the patient to work out some of these internalized child-parent conflicts with the physician as a participant and specifically in the parent role. Many physicians knowingly offer this invitation, confident of their abilities to aid the patient in this specific manner. Other physicians would choose to avoid this involvement. In either case, they need to understand what they are getting into.

Psychoanalytic studies have made other contributions that are informative in this consideration of oral medication. The analytic concepts of "bad mother," "oral invasion," "oral-digestive aggression," "penetration," and "loss of self" are all pertinent to this consideration. When physical or psychic symptoms are related to these concepts the physician's attempts to help the situation will, in part, intensify the very oral-dependency conflicts that originated the disorder. Referring to peptic ulcer patients in this regard, Garma[7] wrote of self-punishing parts of the patient's personality. In this self-afflictive nature is found the danger of the patient's misinterpretation of the doctor's treatment. This part of the personality constitutes an antagonist against which both the patient and the doctor need warn themselves.

Reporting clinical material relating to the same general psychologic areas, Sterba[11] quoted from an address presented by Anna Freud, "In certain persons there exists the misconception and fear that to love anyone means to surrender to the object to an extent which would make them lose their own identity. . . . They would thus be 'invaded' by the love object" (parent or parent-substitute). Sterba added, "the character traits which we have described (negativism, resistiveness, stubbornness, withdrawal, isolation, aggression) seem to serve as a defense against masochistic surrender on an oral-passive level with the consecutive danger of invasion and loss of self." To the extent that these psychologic trends are operative in each patient a tendency will be found on the patient's part toward resistive, uncooperative, or regressive behavior when oral medication is prescribed.

One final consideration in this matter of oral medication has an indirect relationship to a maneuver learned by most physicians early in internship. The young intern soon discovers the trick of popping a thermometer into the mouth of a garrulous patient so that he can more accurately determine the blood pressure level or auscultate the chest. The physician's prescription of oral medication may have a symbolic value similar to that real value of the thermometer. A specifically oral prescription may carry with it the unspoken injunction to a patient to keep quiet about his problems. This possibility raises issues even more complex than appear on the surface. Bateson, *et al.*,[4] introduced the concept of the "double bind" in an article examining the causes of severe emotional disease reactions. "Double bind" characterizes situations in which (1) "the individual is involved in an intense relationship," (2) "two orders of messages (communications) are being expressed to the individual and one of these denies the other, (3) "the individual is unable to comment on the messages being expressed to correct his discrimination of what order of message to respond to." An individual is faced, in an important relationship—perhaps as a patient—with a pair of contradictory communications and is forbidden in various ways to comment on the contradiction presented to him.

The "double bind" is discussed as an important etiologic factor in schizophrenic reactions. It is also presented as having a more general importance. "When a person is caught in a double bind situation, he will respond defensively in a manner similar to the schizophrenic." In double bind situations "the human being (becomes) like any self-correcting system which has lost its governor; it spirals into never-ending, but always systematic, distortions."

In the physician-patient relationship developed when an oral medication is prescribed, there may be the elements of such a "double bind" situation. The patient is admonished that he needs to speak of his problems, tell the doctor what is bothering him, etc. On the other hand, if he has the misfortune to react to the oral prescription as did the young woman patient previously mentioned who had been "shut up with an aspirin," he finds himself dealing with a conflict in being verbally encouraged to speak but interpreting an unspoken communication to keep his mouth shut. This latter message will also prevent him from protesting about the intolerable contradiction into which he has been put. The development of psychosomatic symptoms may be the patient's response to this predicament. Of course, not every patient given an oral ataractic agent will find himself in this "bind." There will, however, be enough such situations in the offing to warrant the physician's awareness of the possibilities.

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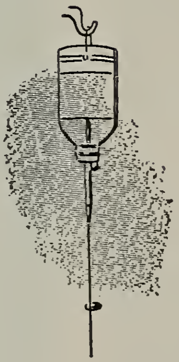


Headache of Extracranial Origin

EMIL SELETZ, *M.D.*, Los Angeles

• The cervical spine, usually regarded as a supporting structure for the head, is also an important viaduct of vessels and nerves which must function with little clearance in a congested and moving space bounded by bone. Pressure in this viaduct is an important cause of headache.

The cervical foramina although apparently roomy, are constricted by cartilage, by the vertebral artery and its adnexae, and by the lateral intervertebral joints. Osteophytosis, swelling or adhesion in this constricted space almost inevitably causes painful vascular or neural disorder.

In certain postures of the neck the vertebral artery is constricted or even occluded. Traction or sprain may likewise cause headache through disturbance of the vertebral arterial nerves, the posterior cervical autonomic system or the spinal accessory nerves which originate in delicate filaments from all points of the cervical spinal cord.

A syndrome described by Skillern—migraine-like suboccipital and retro-orbital headache—is due to disturbance of the second cervical nerve, which communicates with the first division of the trigeminal nerve.

Headache due apparently to a minor scalp contusion may really be due to irritation of a trigger area at the site of an old scalp injury.

By one of those unconscious divisions which assign the medical specialties according to certain anatomic landmarks, the cervical spine has become the province of the orthopedic surgeon. As a consequence, anatomic studies of the cervical spine, with its delicate and complex nerves and blood vessels, usually emphasize the skeletal structures. Some very important organs are not given enough attention, and others are completely ignored, because of their seeming structural unimportance; but these are the very elements that, as the result of some disorder or injury, give rise to most headaches of extracranial origin. To the neurologist and the neurosurgeon, the spinal skeleton is important only as the support and viaduct of nerves and vessels which may suffer from encroachment due to any slight dislocation. This view may provide answers to some of our baffling problems of headache.

CERVICAL FORAMINAL ENCROACHMENT

Encroachment within the cervical foramina, irritating the nerve roots, may be due to occupational or disease deformity or to bony overgrowth, but most often it is due to trauma. Jackson[4] expressed belief that 90 per cent of patients with symptoms of cervical nerve-root irritation have had a sprain of the cervical spine at some time. Often the injury is minor and eventually forgotten.

The transverse foramina of the cervical spine appear roentgenographically to be relatively large, because the soft structures that partition the opening —the vertebral artery and its adnexae (Figure 1)— do not appear in this medium. Altogether three-fourths of the lateral diameter of the foramen is occupied by structures other than the nerve root, and additional space may be occupied by the rarely mentioned lateral intervertebral joint.

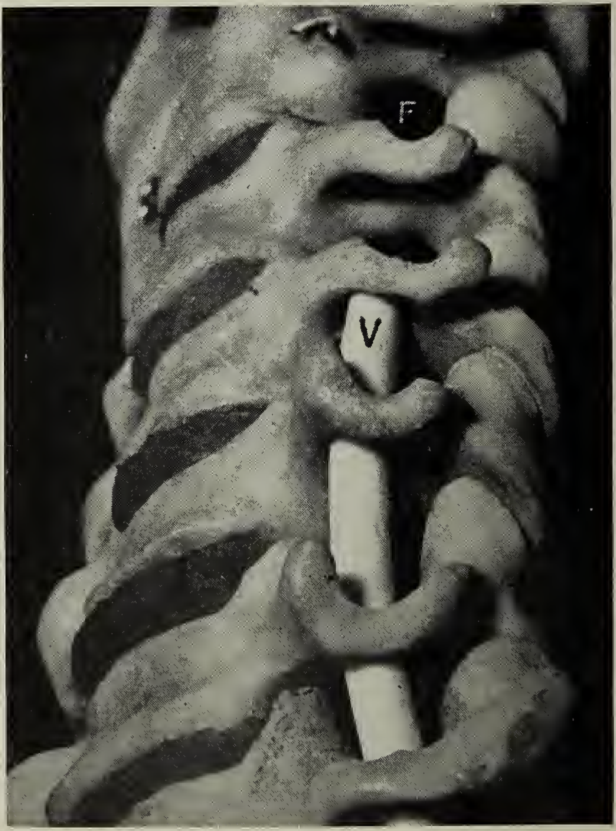
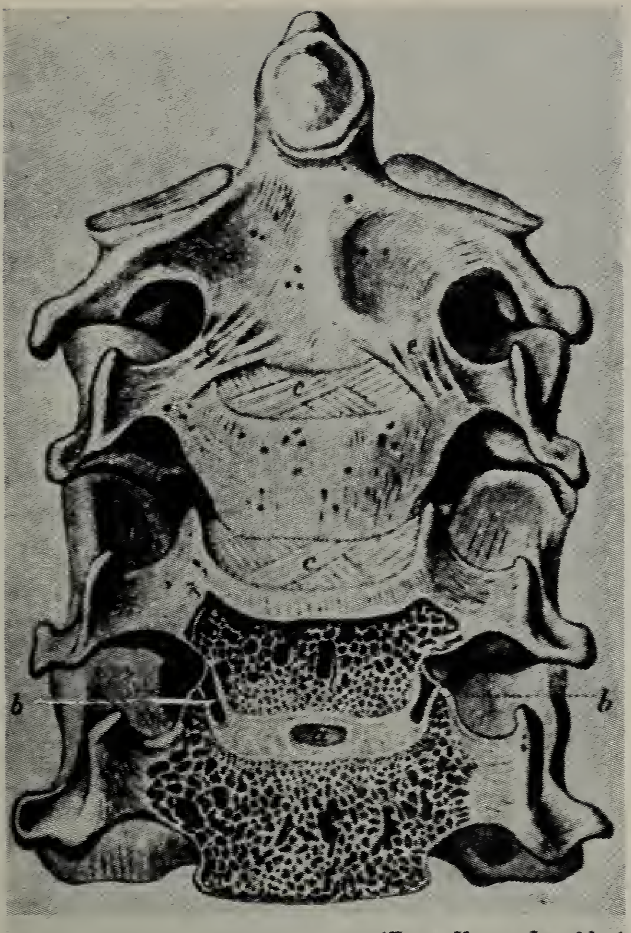


Figure 1.—Cervical vertebrae showing: F—Intervertebral foramen; V—Vertebral artery with transverse foramina.

Presented before the Section on Psychiatry and Neurology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.



(*From H. von Luschka*)

Figure 2.—Lateral co-vertebral articulations of H. von Luschka (b). Reproduced by permission from Eugene Neuwirth: Neurologic complications of osteoarthritis of the cervical spine, New York State J. Med., 54:2584.

Lateral Intervertebral Joints[3]

In the lumbar region the intervertebral disc covers the entire vertebra; but in the cervical area the disc does not extend to the lateral margins of the vertebrae adjoining it; on either side of it lies a small synovial joint. These synovial joints were first described by Von Luschka[12] in 1858 (Figure 2). They have been variously named covertebral articulations, uncovertebral joints, and neurocentral joints. Jackson[4] appropriately named them lateral intervertebral joints.

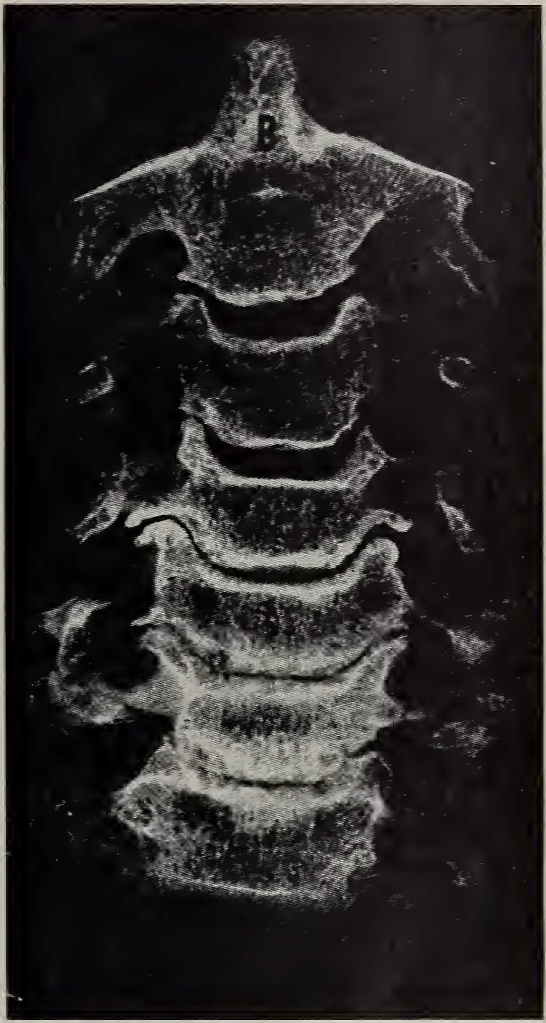


Figure 3.—Degenerative thinning in the lower three cervical discs. Osteophytes have developed laterally, as a result of the intervertebral impingement. (Reproduced by permission from L. A. Hadley: The Spine, Charles C. Thomas, Springfield, Illinois, 1956.)

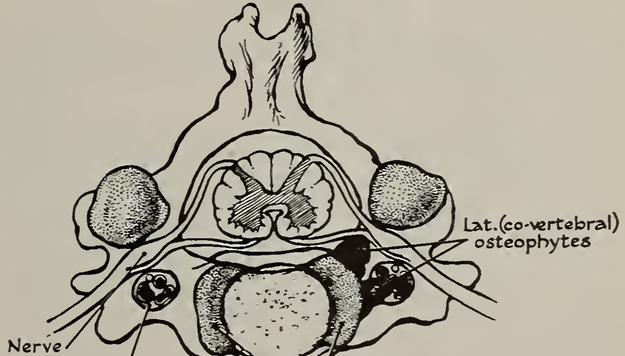

Lat.(co-vertebral) osteophytes
Nerve root
Transverse foramen containing vertebral artery and vein
Co-vertebral articulation

Figure 4.—Cervical vertebra showing the lateral intervertebral joint and the lateral osteophytes encroaching upon the cervical nerve root and the vertebral artery.

Where the nerve root emerges from the vertebra it is in intimate contact with the lateral intervertebral joint, and is subject to potential irritation with every turn of the head. On degenerative thinning of the disc (especially after trauma) the processes of the lateral joints are gradually forced out laterally, causing spurs or osteophytes (Figure 3). These spurs project either laterally, encroaching upon the intervertebral foramen, or anteriorly toward the vertebral artery in the transverse foramen (Figure 4). Capped with cartilage, these osteophytes are considerably bulkier than the roentgenogram discloses (Figure 5). Another source of irritation may result from neck sprain in which hemorrhage into the capsular ligaments of the lateral joints, no matter how minute, causes adhesions, as it often does, between the ligaments and the dural sleeve of the nerve roots. A normal appearance, therefore, on roentgen studies—even opaque myelograms—of the cervical spine does not rule out nerve irritation as a cause of pain. The author has observed, at operation, severe nerve root swelling and dural adhesion at this point, despite failure to demonstrate the abnormality by roentgenography and electromyography.

The Vertebral Artery

Lewis and Coburn[5] demonstrated by angiography of the vertebral artery that in certain postures of the neck the artery is constricted or even occluded, and they correlated these pressures with pain in the upper neck and with suboccipital headache. The usual site of occlusion is the interspace between the first and second cervical vertebrae, the point of greatest movement. Tissington-Tattlow and Bammer[11] showed, by arterial injection in cadavers, complete obstruction of the vertebral artery on turning of the head.

Pratt-Thomas and Berger[8] reported three cases of death following chiropractic manipulations of the neck. Ford and Clark[2] reported two other cases of death several days after cervical manipulations. In these cases the symptoms consisted of severe headache, vertigo, diplopia and ataxia. At autopsy, thrombi were found in the vertebral and basilar and cerebellar vessels. The authors believed that the lesion was initiated in the vertebral artery at the first cervical interspace. (The vertebral artery supplies important areas of the lower pons and medulla, where many cranial nerves originate.)

NERVE DISTURBANCES

The Vertebral Arterial Nerves and the Posterior Cervical Autonomic System

Barre[1] in 1925 described a migraine-like syndrome which he believed to be due to disturbance of the sympathetic network about the vertebral artery. Because of additional work by Lieou in 1928, the syndrome is now known as the Barre-Lieou syndrome. The major symptoms consist of severe headache, cervical pain and so-called tension headaches and at times atypical facial neuralgia.

Neuwirth[7] recently discussed symptoms that follow disturbance of the vertebral nerve following sprain of the cervical spine. These consist of severe headache, diplopia and ataxia and at times disturbance in swallowing. The vertebral nerve originates from the stellate ganglion and ascends in the transverse foramen, along with the vertebral artery. It supplies the vertebral and basilar arteries—the major blood supply to the pons and medulla, including the area that contains the nuclei of origin of the fifth, sixth, seventh, eighth, ninth, tenth and eleventh cranial nerves.

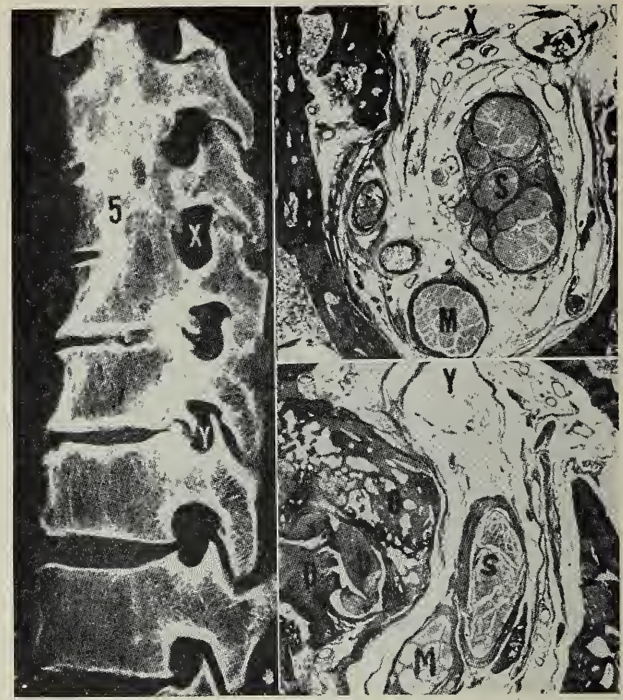


Figure 5.—Section of cervical spine from elderly patient. The fifth foramen (X) has remained essentially normal and is seen in microscopic section at top right (X). (S) sensory, (M) motor root. The seventh cervical foramen, (Y) bottom right, shows encroachment of marginal osteophytes (O). The nerves in this foramen (S and M) are flattened and show thickening of the perineurium. (Reproduced by permission from L. A. Hadley, The Spine, Charles C. Thomas, Springfield, Illinois, 1956.)

The Upper Cervical Nerves

The spinal accessory nerve, with the exception of a small group of fibers, takes origin by many filaments from practically the entire length of the cervical spinal cord.[9] Any acute torsion, flexion, extension or rotation of the neck exerts traction on these delicate filaments, resulting in spasm of the trapezius and sternomastoid muscles. In addition, spasm of the trapezius muscle exerts traction on the great occipital nerve at the point where the nerve pierces the tendinous attachment of the trapezius muscle, thereby greatly aggravating the occipital pain and headache.

The second cervical nerve root terminates as the great occipital nerve at the point where it pierces the tendinous attachment of the trapezius muscle at the base of the skull. Beyond this point it supplies the major portion of the scalp, the upper part of the neck and even portions of the face.

Mayfield[6] showed that the second cervical root is more vulnerable to trauma than other cervical roots because it is not protected posteriorly by pedicles and facets which elsewhere in the vertebral column form the posterior half of the root canal. The greatest rotation of the head on the neck is at the atlas-axis junction, which is the point of exit of the second cervical nerve root. Therefore, traction injury to this root is a most frequent happening in any of the major sprains of the cervical spine.

Occipital-Trigeminal Relations

A communication between the great occipital nerve (second cervical) and the first division of the trigeminal nerve by way of the spinal fifth tract in the medulla was described by Skillern.[10] Pains caused by disturbance of the second cervical root begin in the suboccipital area, radiating upward toward the vertex and forward behind the homolateral eye. The patient often feels as if the eyeball is being torn from the socket. The headaches are migraine-like and often associated with nausea, vomiting and blurred vision. The author considers the work of Skillern a true contribution to the understanding of attacks of hemicrania following sprain of the cervical spine, and therefore suggests that the syndrome be named the Skillern syndrome.

CONTUSION OF THE SCALP

Another important and usually overlooked extracranial cause of headache is posttraumatic neuralgia of the scalp. Lesser scalp contusions, involving elements of the occipital or the trigeminal innervation, may seem to be the cause of recurrent severe and persistent headaches; but careful search often discloses a trigger area at the site of an old scalp contusion. In some cases, excision or blocking of such areas has completely abolished attacks of hemicrania.

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Whiplash Injuries

Diagnosis and Treatment

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• Whiplash injury may extend far beyond the neck, and may involve even the soft tissues of the pelvis. For permanent recovery, all the injuries must be evaluated and treated together.

When impact from the rear snaps the head back and then forward, posterior subluxations in the cervical spine cause anterior-posterior narrowing of the intervertebral foramina, which may result in injury to the cervical nerve roots. Impact at the front, causing hyperflexion followed by hyperextension, has a similar effect although usually not as severe. Resulting symptoms may not appear until two or three weeks later, when irritative lesions have developed because of hemorrhage or swelling. Mild or progressive degenerative changes may cause no symptoms but may predispose the affected area to injury following some slight trauma. Capsular ligaments of the lateral intervertebral joints are especially liable to whiplash injury which may give rise to scars and adhesions that compress spinal nerves. Sympathetic system involvement may cause reflex and referred pain.

Detailed neurologic, roentgen and electromyographic studies may be necessary for proper evaluation of injuries. Seemingly psychosomatic pain or disability is likely to have some physical basis in whiplash injuries.

In 33 patients with whiplash injury, some recently injured and some chronically disabled with persistent symptoms, good results were observed following hydromassage, hot packs, joint mobilization exercises and, in a few, cervical or pelvic traction.

WHIPLASH INJURIES, according to Jackson,[1] usually result from traumatic sprains of the ligamentous and capsular structures of the cervical spine in an automobile collision. When an automobile is struck from the front, the rider's head, neck and trunk are flung forward and either bounce back after colliding with some object or recoil by action of the muscles. When the car is struck from the rear or the side, the inertia of the head and neck holds them stationary while the body is carried in the direction of impact; then, like a whiplash, the head and neck snap after the body and recoil, with stretching and distortion throughout the soft tissues of the neck.

This whipping stress, although its effect is most conspicuous in the neck, often involves ligaments, tendons, joint capsules and muscles of the torso including the pelvis. For lasting good results, all such disabilities should be treated.

The basic injuries resulting from whiplash stress are: Stretching, elongation, sometimes tearing of some soft tissues; inflammation causing varying degrees of swelling and acute inflammatory reactions; avulsion of ligaments, tendons and muscles; periosteal tears; joint effusions; abnormal mobility of joints; joint luxation—an abnormal relation of the articular surfaces.

The symptoms usually consist of pain, tenderness, impairment or loss of muscle power, limitation of motion, or forced movement or forced positions of the head and neck. In addition, cervical nerve irritation may cause weakness of shoulder or arm muscles, varying degrees of anesthesia and paresthesia or hyperesthesia, vascular changes such as blanching or reddening of the skin, drop in skin temperature (less often, a rise), muscle spasm, and localized tenderness or deeper areas of pain felt on palpation.

In chronic injuries muscle atrophy, resulting from either peripheral nerve injury or disuse, and persistent sensory and motor changes, as well as trophic changes, may persist in the involved structures of the neck and upper extremities. One must always keep in mind that injuries other than those of soft tissue strains and sprains may take place—fractures, dislocations, severe subluxations, severe root compression or injury to the spinal cord, brain or autonomic nervous system, or an aggravation of dormant abnormalities, such as cervical arthritis, spondylitis and subacute or chronic torticollis. These possible disorders should be either diagnosed or ruled out, for it is important to know when one is dealing simply with sprains and strains of the soft tissues. The refractoriness of sprains of the larger joints of the body, such as the ankle, knee, elbow, and wrist in healing completely is recognized fully by everyone who handles traumatic disabilities of the body. It is generally agreed that simple fractures not involving joints with their associated sprains and strains, heal much faster and have fewer sequelae of altered functional activities. It is also generally accepted that sprains without fractures are frequently more disabling than fractures and often

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much more difficult to heal completely. Whiplash injuries of the cervical spine fall into the category of acute sprains and strains and understandably give rise to persistent subjective and objective symptoms, pain, headache, and abnormal changes in mobility of the neck because they are extremely difficult to treat.

ANATOMICAL CONSIDERATIONS

There are eight cervical vertebrae joined by six intervertebral discs (no disc between the first and second vertebrae). The discs are thicker anteriorly than posteriorly. Additional lateral intervertebral synovial joints are located on each side of each intervertebral disc (joints of von Luschka). These joints are quite prominent between the first and second cervical vertebrae and at the atlanto-occipital joint where they serve both as swivel and as weight support for the head and the atlas. Since the atlas and axis have no pedicles or lamina, the nerve roots of the first and second cervical joints have no bony covering and no intervertebral foramina. (In the lower joints the nerve root is located between the posterior articulation and the lateral portion of the vertebral body within the foramen.) The apophyseal joints on each side are superiorly and inferiorly placed from the pedicle and lamina of adjacent vertebrae. Each has a true joint capsule reinforced by ligaments, tendons and muscular attachments. The ligaments include the anterior and posterior longitudinal, the ligamentum flavum, the interspinal, the supraspinous, the annular ligaments around the intervertebral discs and some poorly developed ligaments between the transverse processes. Between the atlas and the axis there are five joints: The intervertebral, two articular or apophyseal joints, and two lateral intervertebral synovial joints.

This arrangement of ligaments and joints gives the cervical region three significant characteristics: (1) It provides wide mobility in three directions—front to back, side to side, and in rotation; (2) it prevents excessive movement of the joints, which are limited by the check ligaments; (3) it protects against rupture of the intervertebral discs by the cupping, beveling, lipping and contouring together of the vertebral bodies, by the relative slightness of the discs, by the bordering secondary joints and lateral synovial joints, and by the construction of the longitudinal and capsular ligaments.

Nerve Root Compression

Whiplash injuries which occur when a car is struck from the rear are brought about by primary hyperextension, followed by hyperflexion, and generally result in posterior subluxations. This brings about an anterior-posterior narrowing of the intervertebral foramina. The spinal nerve is compressed anteriorly and posteriorly, and the vertical diameter of the intervertebral foramen also is decreased. Thus a nerve may become compressed in the vertical diameter as well as in the horizontal.

Neck injuries resulting from head-on collisions produce primary hyperflexion of the neck, followed by recoil hyperextension. These whiplash forces usually result in anterior subluxations that likewise narrow the anterior-posterior diameter of the foramina (although usually not as severely as in posterior subluxation) and compress the nerve in a pincerlike catch. Since the vertical diameter, however, does not become narrowed and may actually be increased, vertical compression as a rule does not occur.

The spinal structure tends to throw the greatest stress between the fourth and fifth vertebrae in hyperextension, but between the fifth and sixth in hyperflexion. These joints are most often affected, but others may be also.

Nerve compression and symptoms may not occur immediately after neck injury but may result later from irritative lesions due to hemorrhage or to swelling of surrounding structures. Therefore the physician must be cautious about assuring patients or their counselors that no damage has occurred to soft tissues. Guarded judgment and prognosis should certainly be observed for two to three weeks.

Another possibility to remember is that of mild or progressive degenerative changes that may result in chronic inflammation, predisposing the affected area to disabling injury as the result of even mild and normally harmless stresses. Change in posture, unaccustomed effort or sudden movement of the head may be sufficient to stir up an acute irritative reaction and bring on delayed pain and associated disabilities.

Especially liable to sprains are the capsular ligaments of the lateral intervertebral joints, which are short and taut and may tear, undergo acute inflammatory reaction, and subsequently form scars and adhesions that may compress spinal nerves. Reflex and referred pain may also be produced through involvement of the sympathetic nervous system. Postganglionic sympathetic fibers may be compressed at the level of the intervertebral foramen. From the branch of the sympathetic nerve which supplies the posterior longitudinal ligament and the capsule of the lateral intervertebral joints, pain may be referred through the spinal meningeal branches to areas served by the cervical nerves.

DIAGNOSIS

In addition to history-taking and general physical examination, a special orthopedic examination is needed for diagnosis. Besides this, the soft tissues in the involved area should be minutely inspected for signs of localized muscle tightness or tenderness.

Alignment of joints and bony processes should be studied and range of joint motion should be measured. Strength of muscles of the neck, extremities and trunk should be evaluated. A detailed neurologic examination should be made for sensory or motor changes involving the cranial and spinal nerves, and lastly, the torso and pelvis should be examined in detail for evidence of strains and sprains, luxations or fractures of the bones and joints of the spinal column and pelvis.

Roentgen studies of the spine and pelvis, with special views of the neck, should include lateral views with the patient sitting and the head faced directly forward, as well as with the neck hyperflexed and hyperextended. The straight lateral view shows alignment of the vertebrae and the cervical curvature. Flexion and extension disclose anterior and posterior subluxations, respectively. In addition, right and left oblique views show the size and shape of the intervertebral foramina. Anteroposterior views may be useful in determining variations in the width of the intervertebral spaces, the dimensions and contour of the lateral intervertebral joints, and the presence or absence of hypertrophic changes or compression fractures. All the cervical films should be scanned for evidence of fractures, faulty alignment, degenerative or hypertrophic change, and narrowing or widening of the joint spaces.

Patients with persistent or chronic symptoms may need further study by electromyography or myelography. Electromyography may help to diagnose or rule out lower motor neuron lesions associated with nerve compression or spinal cord injury, and may indicate the level of the injury. Myelography, useful in study of space-occupying lesions, is indicated only when there is a question of fracture, disc rupture, tumor, hemorrhage or any condition that does not respond to apparently adequate non-surgical treatment.

DIFFERENTIAL DIAGNOSIS

The cause of presenting symptoms, such as pain, weakness, headache, limitation of joint motion, and vascular and trophic changes should be determined. If pain seems organic in origin, does it result from local inflammation or from nerve compression or irritation? Is it segmental, referred, or associated with disorders of somatic or visceral structures? Is it related to some abnormality of the brain or the spinal cord? Or can it be ascribed to psychosomatic origin by ruling out all these other possibilities? The author believes that in most cases where psychologic components are important, they are somatopsychic rather than psychosomatic in origin. It is in these cases that the greatest danger exists of inadequate recognition and improper or inadequate treatment.

TREATMENT

Seventy per cent of patients with "cervical disc syndrome" responded to conservative treatment, according to Spurling and Segerberg,[5] who reported in 1953 on 110 cases in which "unequivocal clinical diagnosis of root compression in the lower cervical region was made." The other 30 per cent were surgically treated. The conservative regimen consisted of bed rest with cervical traction for seven to ten days, using six to twelve pounds of traction, two hours of stretch and one hour of rest, and no traction at night. The following year Martin and Corbin (1954)[3] reported their observations upon conservative treatment of similar patients, on an ambulatory basis. This consisted of daily treatments in the physical medicine department for a period of one day to three weeks, with an average of eight treatments for each patient—application of heat and massage to the neck and shoulders, followed by cervical traction at 30 to 100 pounds, with an average pull of 60 pounds applied from one to three minutes twice daily. During traction, the patient was instructed to shrug his shoulders and then relax. Rotation of the head through a maximum range to the right and to the left was carried out two or three times, either by the patient or with the assistance of the physician giving the traction. Following the initial improvement, the patient was instructed in home treatment of application of radiant heat to the neck, followed by cervical traction, using home traction equipment consisting of a simple felt head-sling which could be fastened or suspended from the door frame, and traction applied by the patient himself by slightly bending his knees. Observations were made on 61 patients treated with this procedure; 67 per cent had definite improvement during the initial period, 77 per cent were definitely improved in six months to five years later, 3.2 per cent showed no change, and 20 per cent required operation.

Similar observations on 80 cases of cervical syndrome were reported in 1955 by Krusen and Leyden-Krusen.[2] The treatment consisted of the application of heat, usually short-wave or microtherm diathermy, massage, vertical traction starting with 30 pounds and gradually increasing to tolerance, active exercises of the neck muscles consisting primarily of rotation and lateral bending, and in some cases electrical stimulation of the neck muscles. The average treatment time was three to four weeks. Among 328 patients having a history of injury, 40 per cent showed decided improvement, 47 per cent moderate improvement, 13 per cent no improvement. Among 472 without a history of injury, 42 per cent had good improvement, 38 per cent moderate improvement and 20 per cent none. Cervical syndrome due to acute fibrositis responded very satisfactorily to conservative treatment, with good improvement in 91 per cent, moderate in 7 per cent, none in 2 per cent.

Customary Conservative Treatment

Conservative, nonsurgical treatment of cervical disc syndrome, or whiplash injuries usually consists of a selected combination of the following therapeutic procedures: The use of some form of heat, massage, traction, immobilization with a cervical collar during the day and a contour pillow at night, injection of local anesthetic, drugs—usually some type of sedative or anodyne—correction of posture, therapeutic exercises, mobilization therapy and/or the application of ultrasound to selected areas. The traction may be applied manually; intermittently with a Sayer head-sling, which may be either manual or motorized; or continuously during the day or at night or both, usually with the patient recumbent.

PERSONAL OBSERVATIONS

At the California Rehabilitation Center in the past two years we have treated 33 patients with whiplash injury. Thirteen began treatment at the center soon after injury; results, without exception, have been satisfactory after three to twelve treatments over periods ranging from a few days to three weeks. The other 20 patients, whose symptoms had persisted after extensive treatment elsewhere with little or only partial relief, required as a rule more intensive and prolonged therapy.

In all these cases the disability usually extended beyond whiplash strain of the soft tissues of the cervical vertebrae. There were usually multiple injuries of the back; ligaments, tendons, joint capsules and muscles of the torso and pelvis were involved in multiple subluxations extending from the base of the skull to the tip of the spine. Similar injuries were often present in the sacroiliac and lumbosacral regions and the symphysis pubis. For lasting improvement, it was necessary to treat all the disabilities and their symptoms—muscle soreness, tenderness, pain and limitation of motion, fatigability, headache, backache, torticollis, difficulty in sleeping and vocational disabilities.

Treatment for most patients consisted of hydrosubmersion with hydromassage, Kenny or chemical hot packs applied to the neck and back, and mobilization. Tissue mobilization was achieved by flexibility exercises, stretching and mechanical percussion massage with the Percussomotor.* Joint mobilization was obtained with Mennell's maneuvers.[4] In some cases, extensive fascial stretching and resistive exercises were added. Only five of the 33 patients received cervical or pelvic traction, which was applied intermittently (either by hand or by manually or motor-operated sling) or continuously with sling, pulley, and five to eight pounds of weight. The latter treatment was applied at home during the night and sometimes during the day. Only three patients wore a supportive collar between treatments.

Among the 20 patients treated for chronic symptoms, and except for three still under treatment, all were discharged as greatly improved and essentially symptom-free. In the 13 treated soon after injury the symptoms were completely abolished without recurrence to date.

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*A small, electrically controlled vibrator of percussion type, fitted with various sizes and shapes of rubber applicators to transmit mechanical energy of selected frequency and intensity to various soft tissues of the body.

Noncicatrizing Alopecias

With Special Reference to Alopecia Areata

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• Since the epochal work of Hamilton there has been general acceptance of the causal relationship of the male sex hormone, age and familial inheritance in development of male pattern baldness.

Some of the medicaments used in recent years may cause a diffuse loss of scalp hair. Alopecia that accompanies disease states is probably due to generalized toxemia and disturbances in metabolism. Sometimes male pattern baldness occurs in physiologic states, as exemplified by diffuse hair loss occasionally in the postpartum period.

Alopecia areata deserves a critical appraisal, since it may be evidence of underlying neuropsychotic states that need psychiatric diagnosis and treatment. The development of alopecia totalis or universalis in 50 per cent of the prepuberal cases of alopecia areata is of real significance, especially since so very few patients recover their normal scalp hair.

The conclusions reached by the authors of two articles reporting on 368 cases of alopecia areata, alopecia totalis and alopecia universalis that the evidence is overwhelming against the malfunction of the endocrine glands as the cause of alopecia areata must be considered real contributions to our understanding of this condition.

A few conditions simulate alopecia areata. Probably the ones which are seen most often are trichotillomania and patchy baldness caused by agents used in hair waving and straightening.

Our findings in 22 cases of alopecia areata of a persistent inflammatory perivascular and perifollicular infiltrate, massive plugging of the ostia, disappearance of robust hair follicles and diminution in total number of hair follicles and sometimes fibrosis are not necessarily diagnostic of alopecia areata but seem to be very definitely characteristic.

Treatment for alopecia areata is of little avail. At this time we do not recommend the general use of the corticosteroids despite the improvement of scalp appearance in the majority of instances in which the systemic administration of these hormones have been employed.

ONE OF THE RIDDLES that children used to ask each other in the bygone days was, "What is it you don't want but after you get it you wouldn't part with for a million dollars? The answer was always, "a bald head." Bald or not, no one wants to lose his head.

We ask ourselves the riddle of the "why" of a bald head. In order to develop a clearer concept of the microscopic changes that occur in the scalp in the various kinds of alopecia, we embarked upon a study involving the examination of tissue from 26 consecutive patients with alopecia in a period of 12 months at the U. S. Naval Hospital, San Diego, California. Included were 22 cases of alopecia areata, in which biopsy is not usually done as a routine procedure.

In Greek, *alopecia* means the mange of foxes. The Greeks had two additional words, *acomia* and *atrichia*, which are less often used as an expression for baldness. From Latin is derived the term *calvities* which has a similar meaning, although precisely it should be used to mean baldness of the sinciput, the anterior and upper part of the head.

In practice we ordinarily think of alopecia as loss of scalp hair. This is because the scalp hair is most frequently involved, either in physiologic familial baldness or in pathologic states. Actually, the other hairy areas of the body often share in alopecia.

Alopecia has many names, causes and shapes. It is important to understand the significance of each. The possibility of permanent loss of scalp hair strikes panic in many patients whether male or female. The loss of all hair of the body, face and scalp can result in mental stress or aggravate a preexisting neurosis, and is, indeed, a most distressing situation.

Some of the forms of alopecia are so rare as to merit little comment in an article of this limited scope. To discuss the alopecias, however, it is necessary to relate them to ordinary baldness, disease entities, syndromes and certain confusing disease states.

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About 95 per cent of all baldness is ordinary or common male baldness. Terms such as *premature alopecia, presenile alopecia* and *senile alopecia* serve no useful purpose and should be discarded in favor of *male pattern baldness.* If necessary for descriptive purposes the qualifying word *early* or *late* may be added.

Hamilton[6] classified common baldness as it occurs in Caucasians into eight types based on the patterns of development as it occurs in males. He noted that advanced stages of baldness were present in 58 per cent of men 50 to 92 years of age. For practical purposes it may be estimated that ordinary male baldness occurs in 25 per cent of the males by the age of 25 and in 50 per cent of males by the age of 50. It should be kept in mind that those males who show a beginning frontoparietal recession in adolescence may expect to be bald at an early age—in their twenties or early thirties—and will finally have pronounced baldness. As an end stage, these men usually have only a fringe on the sides of the scalp, whereas in men in whom frontoparietal recession comes on in middle life the process is usually slower and it may never reach the proportions it does in the early baldness group.

There are three main etiological and interrelated factors in common male baldness. These are heredity, gonadal influence and age.

Osborn,[9] in a study of 22 families, reported that baldness was a sex-limited trait, dominant in men and recessive in women, but directly inherited by the son from the father or the mother even though the mother was not bald. A bald-headed man transmits baldness to half his sons and the recessive gene to half his daughters. For a woman to become bald she must have the inheritance as a duplex and she transmits as does the bald-headed father.

As to the androgens, alopecia does not develop in men who fail to mature sexually. It is an observation that baldness is more common in men with an abundant body hair than in those with thin lanugo. A eunuch has a good scalp hair coverage but his axillary hair does not develop. Women, children and eunuchs remain free of scalp baldness. Eunuchs who come from families whose normal males tend to become bald, rapidly become bald if treated with 20 to 30 mg. of testosterone daily.

Age is definitely a factor, although paradoxically baldness increases while the production of baldness-stimulating testicular hormone decreases. The degree of male baldness is not correlated with the amount of circulating androgens although the hormone is necessary in some amount. Another seeming paradox is the development of baldness on the scalp with stimulation of hair growth elsewhere on the body. When this progresses to an advanced stage the subjects are the so-called "monkey-men."

One of the characteristics of virilizing tumors of women is masculinization with development of hair distribution as in men. Baldness of the scalp has not been noted in women with masculinizing tumors.[6]

Ordinarily the loss of hair in the common male baldness is gradual, the hairs becoming weaker and finer until finally the follicle does not produce. It is not generally appreciated that there are some persons who lose their hair in episodes which have an onset that is sudden with hair loss in alarming amounts, yet the loss is as permanent as it is in the usual slowly progressive type.

Numerous concepts and hypotheses have been advanced to explain the cause and mechanism of ordinary human baldness. Many of these are reviewed in Rattner's[11] humorous and very enlightening article on ordinary baldness. Most of the hypotheses have been more or less abandoned since the simple demonstration that testicular hormones are a prerequisite for the common patterned alopecia of the male. A few concepts have been studied in the past eight years and will be mentioned if only to question their validity.

In 1950 Szasz and Robertson[14] reviewed the literature concerning ordinary baldness and advanced a theory of their own. They conceived that ordinary baldness was an end result of chronic activity of the scalp muscles which leads to shearing stresses in the dermis of the scalp and consequent ischemia. They suggested that bilateral section of the branches of the facial nerve supplying the occipitalis muscles be tried in early cases. That this procedure would have little effect may be inferred from the fact that the nerve supply to the hairy part of the head has been severed to relieve pain due to cancer and in no instance has the hair growth been affected.

The operative interference with the nerve supply to the tissues should likewise dispose of the theory that chronic anxiety states cause scalp tension resulting in hair loss.

There was some interest in trying to explain how the sex hormones played a role in male balding, possibly in the relationship between scalp looseness, thickness, fat loss and luxuriance of hair growth. Radiological studies of the thickness of the soft tissues of the scalp on 523 subjects, aged 4 to 69 years of age, by Garn, Selby and Young[4] led them to conclude that the fat-loss theory of male pattern balding cannot be substantiated and that more elaborate theories involving this assumption therefore cannot be accepted. This conclusion was based on the fact that when scalps were compared, bald men and men with luxuriant hair growth of the same age were found to have no significant difference in scalp thickness.

In microscopic examination of sections of tissue from scalps with common male baldness of long standing the sebaceous glands were found to be numerous and large and the sweat glands seemed to be normal in amount and appearance. There was a reduction in the number of follicles and the ones remaining appeared atrophic.

Except for the extreme seborrheic states with concomitant scratching and infection, we find it difficult to accept such conditions as pityriasis simplex, seborrhea oleosa and seborrheic dermatitis as causes of alopecia. Despite the fact that these conditions may co-exist with alopecia, the pattern of the disease is not that of the common male baldness; many men with thick hair have these conditions, and in women the presence of these conditions does not seem to cause baldness.

DIFFUSE LOSS OF HAIR

Diffuse loss of hair has been reported to be due to many and divers causes. Only a few will be mentioned here.

Medicaments: Thallium and other heavy metal salts, quinine, atabrine, cyverin, barbiturates, arsenic, aminopterin, reserpine, coumarin, heparin, sulfonamides, thyroid antagonists such as propylthiouracil and massive doses of vitamin A.

Disease states: hypothyroidism, iron deficiency anemia in women, leukemia, diabetes, debilitation, impacted wisdom teeth, focal and general infections, acute systemic lupus erythematosus, and fevers over 103 degrees Fahrenheit.

Women may have a diffuse loss of hair in the postpartum period with reasonably fast regrowth. There are many women who have some diffuse loss of hair following menopause. This is usually apparent with advancing age and, as a rule, is self limited.

ALOPECIA AREATA

In the consideration of alopecia areata, we enter a world of confusion as to etiology, prognosis and treatment. It is truly an unusual condition being in some cases sudden and devastating, becoming universal and permanent, and in others the hair regrowing but the condition recurring either regularly or irregularly.

The condition occurs approximately equally in the two sexes The rate of appearance is relatively uniform in each of the first four decades of life with 85 per cent of cases appearing by the age of 40. Various reports would place the inheritance factor at about 20 per cent, although this seems rather high in our experience. In a review of the available literature,[8,17] identical alopecia occurring in identical twins simultaneously was noted in two instances.

Walker and Rothman[16] reported that alopecia areata is seldom limited to one attack. All patients observed for periods exceeding 20 years had relapse, and 85 per cent of 230 patients observed for periods of from five to twenty years had one or more relapses.

Even more important are these same authors' statistics concerning development of alopecia totalis from alopecia areata. They found 50 per cent of the patients whose disease began before puberty eventually had alopecia totalis and 23 per cent of those with postpuberal onset developed the severe form of the disease. The course of alopecia totalis, once developed, was about the same in prepuberal and postpuberal groups, about 75 per cent of both groups remaining totally bald, 22.5 per cent having partial regrowth and only 2.5 per cent a normal regrowth. The investigators made no attempt in this group to separate cases of alopecia totalis from cases of alopecia areata universalis.

In our experience alopecia totalis is almost always accompanied by either partial or complete loss of hair of face and body.

The cause and mechanism of production of alopecia areata is obscure. It has been attributed to many conditions, most strongly to the following: Toxic, endocrine, neurogenic, local infections and focal or general infection.

The appearance of lymphocytic infiltrate about the hair follicles and sometimes about the blood vessels and other appendages early in the condition indicates a possible toxic process. In toxic states, however, the alopecia tends to be diffuse. The round patches of alopecia areata do not conform to blood vessel or nerve supply distribution. Local infection does not seem to be a factor and syphilis seems to be the only known systemic infection producing patchy alopecia.

Despite the occasional case reported implicating the endocrine glands as a causative factor in alopecia areata, statistical studies do not confirm these isolated reports.

Walker and Rothman[16] in a study of 230 cases found that in the overwhelming majority there was no evidence of endocrine abnormality as determined by physical and laboratory tests. They did express belief that endocrine factors may play an accessory or modifying role in alopecia, noting that the course of alopecia is more severe when it develops prepuberally, that some cases develop during a state of thyrotoxicosis and that some patients recover completely during pregnancy and lactation. Waisman and Kepler,[15] in an appraisal of endocrine factors in causation of alopecia generalisata or universalis in 138 cases at the Mayo Clinic, concluded that there was no consistent functional abnormality and that the assumption of endocrine causation for this condition is unwarranted by the facts. They feel that these conclusions should apply even more forcibly to the less severe alopecia areata. In six of the patients the hair regrew during pregnancy only to fall out shortly after parturition. In two cases the condition started during pregnancy and in two others the hair began to fall in the puerperium. They concluded that the very fact that a woman becomes pregnant speaks fairly well for normal thyroid, pituitary and ovarian glands.

The significance of the undoubted influence of corticosteroids in local injections and oral preparations in inducing regrowth of hair in cases of alopecia areata and alopecia universalis may compel reconsideration of the status of the adrenals and perhaps the gonads. It seems relatively certain that before the experimental use of the corticosteroids in these conditions, no amount of any endocrine preparation could be consistently cited as producing regrowth of hair in alopecia totalis or universalis.

The one specific influence upon which most will agree is the psychosomatic aspect. The association of psychic trauma has been noted and commented upon at length. Irwin[18] did a random sample study of 25 male and 30 female patients with alopecia areata whose ages varied from 10 years to over 50 years. Thirty-nine patients had alopecia areata, 13 had alopecia totalis and three had alopecia universalis. He classified these into three groups; the neurotic, the traumatic and the cases in which no psychic factor was apparent. Thirty-five patients (63 per cent) were put in the neurotic group. These patients had alopecia accompanied by a sufficiently severe degree of psychoneurosis to warrant psychiatric treatment. The males in this group had a lack of drive, tended to solitariness, lacked aggressiveness and were inhibited sexually. Overt anxiety was not a major feature but depression was present in every case. The females tended to duplicate these feelings and evidenced a feeling of insecurity, sexual immaturity and a tendency to withdraw from life. In the traumatic group were 13 cases or 23 per cent. The patients were reasonably well adjusted with no evidence of previous neurotic disability. The emphasis was placed on the traumatic event, such as a threat to some person of emotional significance to the patient. The event was usually sudden and unexpected with no threat toward the afflicted person himself. Examples include death of dear friend or relative, or the involvement of a bus driver in an accident during which some of his passengers were killed. In the third group were seven patients (14 per cent) who were not found to have psychiatric disability and in whom the alopecia did not appear to have been emotionally precipitated.

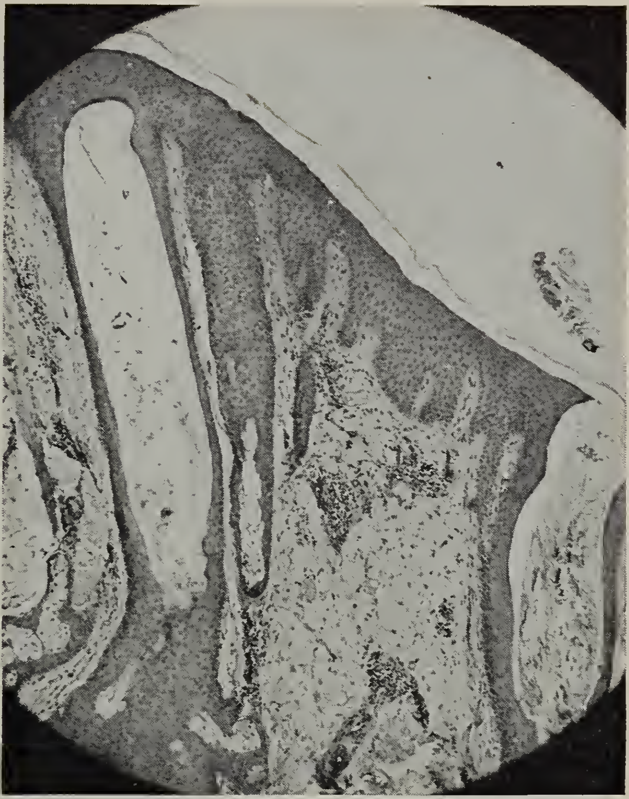

Figure 1.—Giant ostia with keratin plug remaining in one. The perivascular infiltrate is moderate about the blood vessels and sparse elsewhere. The homogenization adjacent to the follicle on the left is frequently seen (×380).

Greenberg[5] emphasized that patients with alopecia areata not only may have had recent emotional stress but also have had serious mental and emotional difficulties for many years and it may be that the role of the precipitating factors is of less importance than is usually assumed. In his psychiatric study of 44 adolescents with alopecia he found 73 per cent to be psychoneurotic and 20 per cent were psychotic or bordering on psychosis. The patients did not conform to any single personality type but many appeared to be withdrawn and passive. Depression or anxiety or both were frequently prominent. He stressed the need for treating the patients from a psychiatric standpoint.

Haynes and Parry[7] reported on 61 cases of alopecia areata in which all patients had errors of refraction, the predominant one being a small astigmatic error at an oblique axis. In general, there was rapid regrowth of hair in three months after they began the continuous wearing of corrective glasses, with no recurrence as long as the error was adequately corrected. One patient had recurrence three years after regrowth of hair when he ceased wearing glasses. Another had recurrence when his eyes changed and his glasses did not have the proper correction. The patients were observed in two groups, each for about five years. The authors suggested a reflex nervous irritation from the refractive error as a possible cause of alopecia. Since publication of that article, one of us (WNN) has had a number of patients with alopecia areata examined for errors in vision, but thus far no significant association of refractive error with the disease has been noted.

A peculiar form of alopecia areata known in antiquity and given the name *ophiasis* by the Greeks is seldom seen but easily recognized by its unusual configuration. It usually begins in childhood and is characterized by beginning as a bald spot on the occiput then spreading bilaterally in a band one to two inches wide over the ears, meeting in front in the complete form. Hair may regrow but recurrence is the rule and final cure is rare.

Of interest is the increasing recognition that the nails may also be involved in variable forms of dystrophy.

Various investigators, we among them, have obtained growth of hair in alopecia areata and alopecia universalis by local injections and systemic administration of the corticosteroids. Dillaha and Rothman,[3] using 100 to 150 mg. daily of cortisone acetate, obtained cosmetically satisfactory regrowth of scalp hair in 15 of 22 patients, most of whom had either alopecia totalis or alopecia universalis. Six of them had diffuse growth and in nine it was patchy. One patient with alopecia regrew eyelashes with no regrowth in other areas and only three regrew axillary and pubic hair. Regrowing hair may become visible as soon as three weeks after the beginning of therapy and in most cases in not more than four weeks. A maintenance dose had to be determined, for without it hair would again fall out. It was noted that the response was better if loss of hair was recent than it was in cases of long standing. The investigators emphasized that they did not recommend this form of therapy for general use.

We obtained regrowth of hair in two cases of alopecia areata by local injection of hydrocortisone. Injection of hydrocortisone in a test site on the scalp in a case of alopecia congenitalis resulted in local growth of short, pigmented hairs which promptly fell out when the patient developed measles. In this instance there was a loss of tissue substance in the test area, especially along the lines traversed by the injecting needle. This "damping" effect has been reported by other observers.

Local stimulating treatments have been advocated, but these do little except convince the patient that something is being done. Pending the development of a substance for stimulating the growth of the hair follicle, the best treatment seems to be of

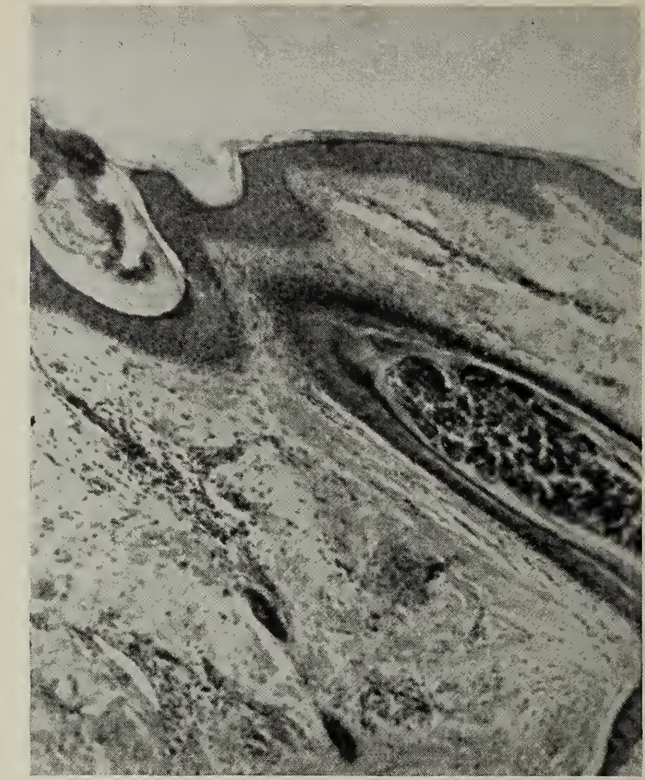

Figure 2.—Heavy appearing plug extends to level of sebaceous gland in scalp of patient with alopecia areata (×380).

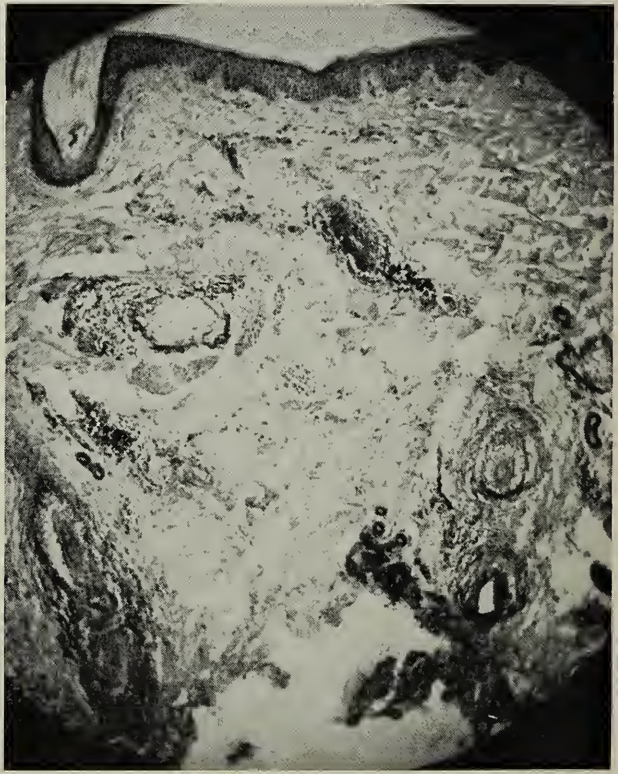

Figure 3.—Characteristic microscopic appearance of section of scalp in alopecia areata. The inflammatory infiltrate is: Perivascular in upper center, around sebaceous gland and muscle remnant in upper left, remnants of hair follicles lower right and left and sweat glands in lower right center (×260).

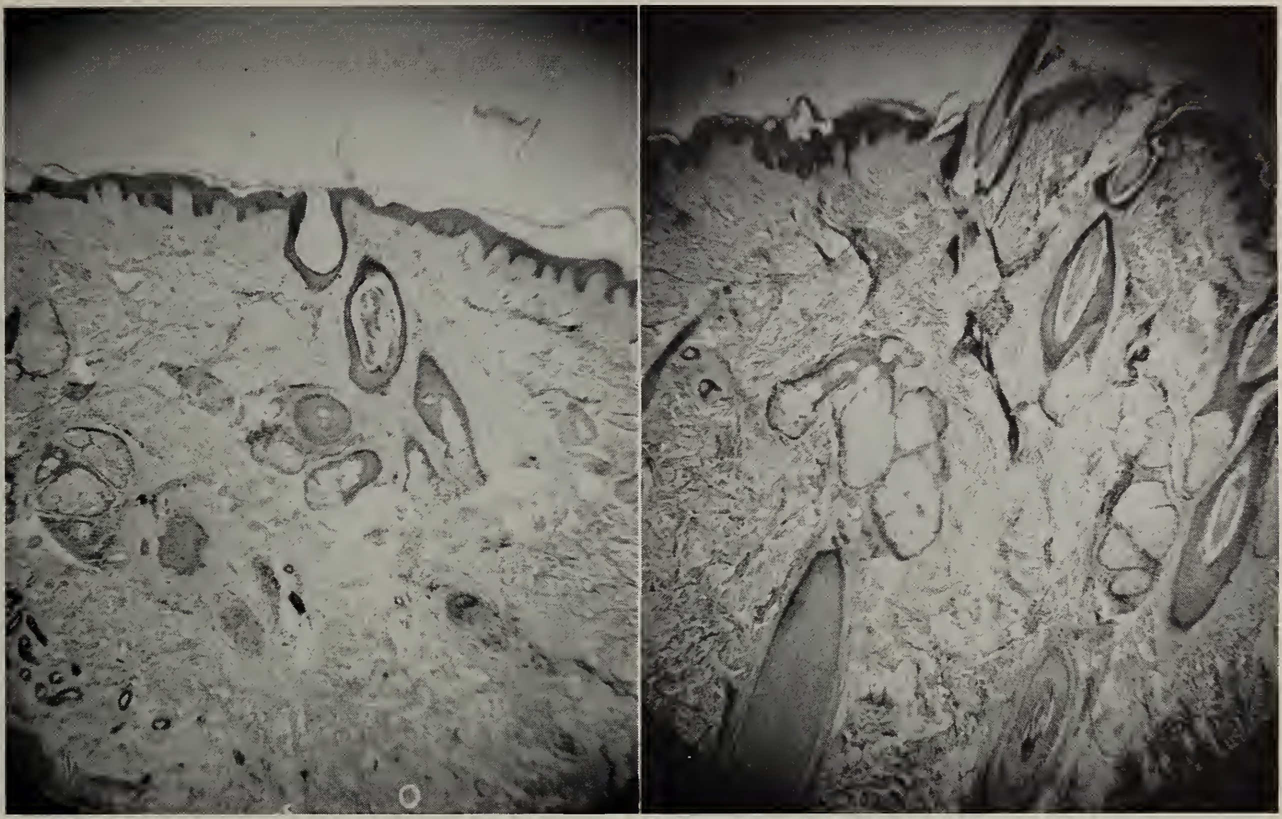

Figure 4.—Section on left is from alopecia area of three weeks' duration. This degenerative appearance contrasts with section on right from adjacent, grossly normal hairy scalp, where follicles are robust, hair shafts are present and there is no plugging except the keratin which normally surrounds the hair shaft. Inflammatory infiltrate is similar in both sections, however (×120).

psychiatric nature—and a wig in cases of alopecia totalis.

NONCICATRIZING ALOPECIA SIMULATING ALOPECIA AREATA

An interesting order of alopecias which sometimes offers problems in differential diagnosis is made up of the noncicatrizing varieties simulating alopecia areata. In this day of infrequent early syphilis and the relaxation of diagnostic vigilance for the disease, it may be that secondary syphilis sometimes escapes detection. Even though some of the alopecias of secondary syphilis really resemble alopecia areata, the further examination of the patient, adequate history and serological studies should readily establish the true nature of the condition.

Ross and Friede[13] reported two cases of tick bites of the scalp of children which superficially resembled the dermal lesions of secondary syphilis. In both children the involved areas were ovoid, about 1.3 cm. in the long axis and distributed mainly over the occiput. Each area was completely devoid of hair and follicles could not be seen. These were not granulomas, but the crusting of one lesion and subsiding inflammation in another suggested to the investigators that the itching brought on scratching and secondary infection. They removed one tick, leaving an area of uninflamed alopecia 0.6 cm. in its long axis. It may be that the alopecia produced by the tick is due to a toxin injected by the tick.

We have seen a number of cases in which alopecia developed at the site of local pyogenic infections and did not regrow upon subsidence of the infection although grossly there was no visible scarring. These local infections seem to be superficial and confined to patches varying from 3 mm. to 3 cm. in size. In some cases the lesions may have been present for months and to control them it may be necessary to give antibiotics systemically in addition to appropriate local antisepsis including topical use of antibiotics. Sometimes sensitivity studies do not reflect the true sensitivity of the organism, usually a staphylococcus, and one must proceed by trial of one or more antibiotics. We have had most success with erythromycin and albamycin systemically combined with three per cent hexachlorophene solution compresses for five minutes followed by application of chloramphenicol compresses and ointments. In one of the cases we observed the lesions resembled the description and pictures of the cases reported by Dexter[2] and coworkers as being due to Mima polymorpha; but cultures in that case grew only staphylococcus aureus. Furuncles of the scalp frequently result in a temporary patchy alopecia of nonscarring nature.

Not infrequently, tinea capitis is mistaken for alopecia areata. However, in such instances the Wood's lamp, scrapings and cultures for fungi help establish the diagnosis.

Lesions like those of alopecia areata that were due to thioglycolate preparations used for putting a wave in the hair were reported by Reiches and Lane.[12] Apparently there are two types of cutaneous irritation from "cold wave" thioglycolate. One is a contact dermatitis and the other a transitory alopecia. Hair straighteners also are capable of producing alopecia. These are usually a base such as sodium hydroxide in equal parts of lanolin and petrolatum. The alopecia, accompanied by dermatitis, may come on as soon as three days after use of the substance and last as long as three months.

Traumatic marginal alopecia due to tying up the hair in braids or curlers was first reported in Negro women. Where the pulling was continuous and strongest, as it was at the temporal and frontal areas, patchy alopecia developed. This condition has now been reported a number of times in white women. In addition to that type, we have also seen a ring of alopecia in a seven-year-old white girl which resulted from her mother's using a clip to gather up a large lock of hair on the forehead. Around the periphery of the lock was a 1 to 2 cm. ring of alopecia. Apparently it was caused by the pulling of the peripheral hairs that occurred when the rather heavy lock bounced as the child moved about at play.

Canizares[1] reported a case of localized alopecia characterized by a unilateral or bilateral patch of complete alopecia of triangular form, occurring on the temples at the hair margin with the base forward and the point of the triangle ending near the ear. This condition was originally described by Saboraud, who recognized it as a congenital, permanent defect which should not be mistaken for alopecia areata.

One of the most unusual diseases sometimes confused clinically with alopecia areata is the baldness trichotillomania. The patient's habit of twisting off or pulling out his own hair in rather irregular patches is bizarre and in children is frequently accompanied by thumb sucking. Most of the time the patches are not sharply demarcated and usually they contain hairs of different lengths, but occasionally a patient adept at manual epilation achieves a result remarkably simulating alopecia areata. In children the plucking out of eyelashes or of an end of an eyebrow may offer a dismaying diagnostic problem, as may the pulling out of patches of a mustache in an adult, unless the examiner maintains a high index of suspicion. An older child's surrep-

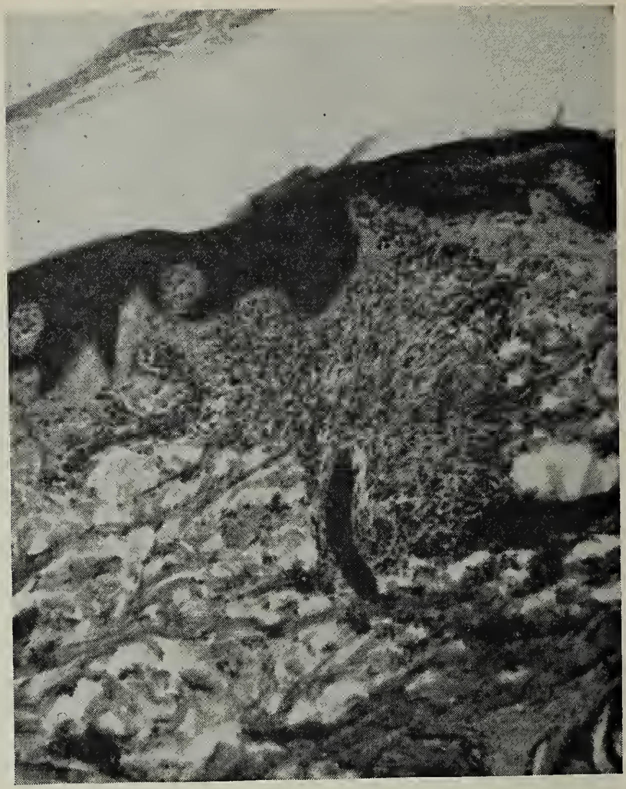

Figure 5.—Subepidermal fibrosis. Patient had alopecia partialis generalisata of ten years' duration (×380).

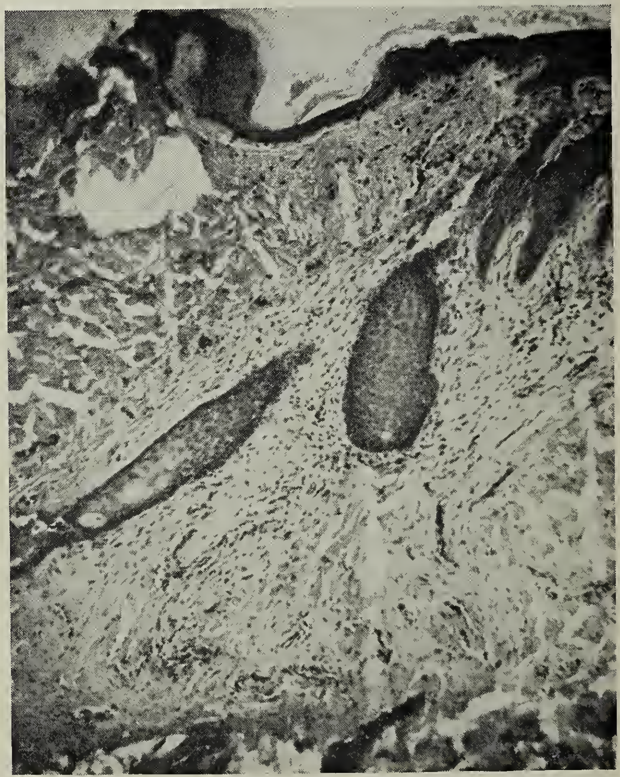

Figure 6.—Area of fibrosis and mild inflammatory infiltrate about parts of hair follicles. Patient had universal alopecia 15 years previously with patchy regrowth of hair at time of biopsy (×340).

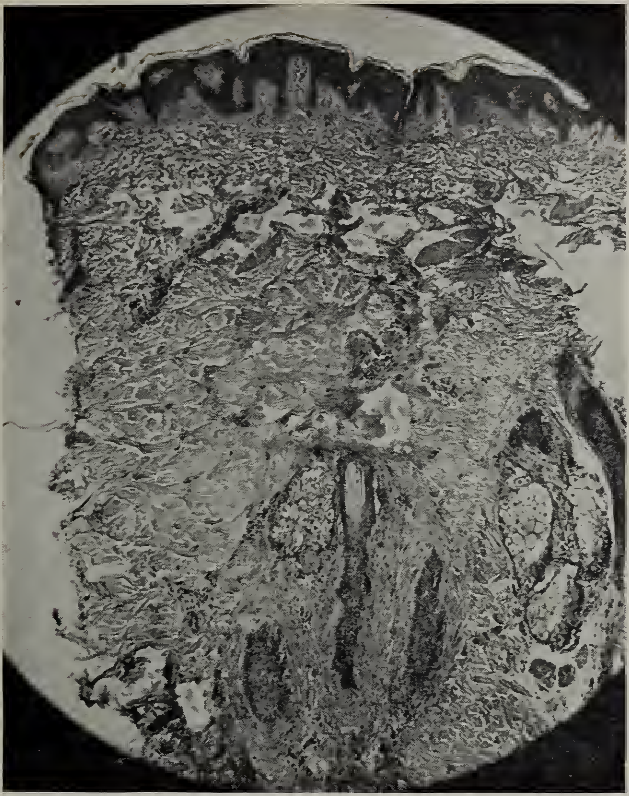

Figure 7.—Microscopic appearance of section of scalp in case of alopecia areata of six days' duration. The perivascular infiltrate is minimal. The three hair follicles with the loose connective tissue form a complex which is seen frequently in the scalp (×380).

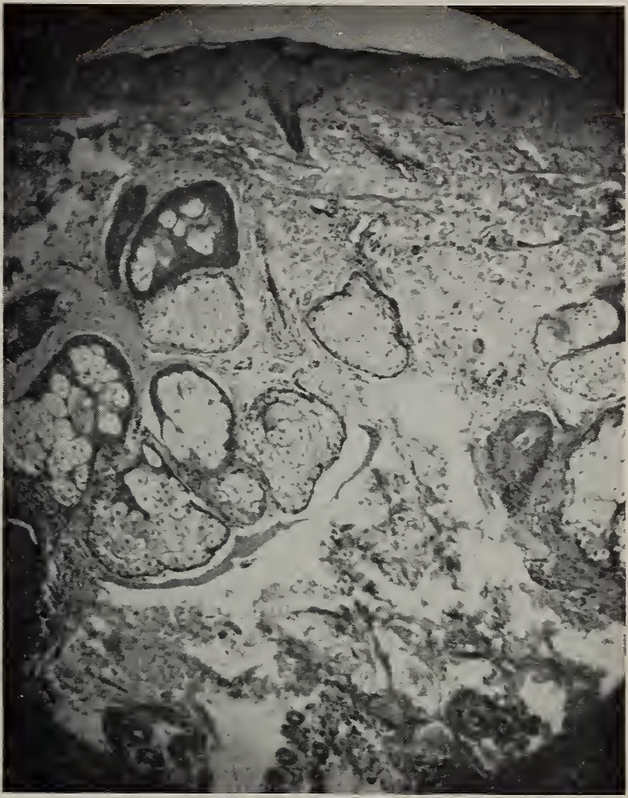

Figure 8.—Complete absence of formed hair follicles in scalp of 35-year-old man with alopecia universalis of two years' duration. Serial survey showed reduced number of follicle remnants with surrounding inflammatory infiltrate in deeper sections. Hair shafts are replaced by detritus. Note apparent superficial position of sebaceous glands (×340).

titious plucking of hairs from the scalp of an infant or younger sibling can also offer problems in detection and diagnosis. The habit of trichotillomania should not be dismissed lightly, for it may betoken a serious neurotic illness. It is a common habit among insane persons. Even though in the average case of trichotillomania there is no associated psychotic behavior, the habit is truly a compulsion and frequently psychiatric help is necessary to stop it.

HISTOPATHOLOGIC FEATURES OF ALOPECIA AREATA

We had hoped that review of the 22 cases of alopecia areata in the present series would permit a definite statement as to typical microscopic features. In this we have been partially disappointed.

Certain features not specifically diagnostic of alopecia areata did, however, appear to be present in most cases. The presence of huge, patulous orifices, devoid of hair, which were plugged or filled with keratin detritus was a striking feature. The plugging was more pronounced than that observed in lupus erythematosus. Except for absence of pigment, the epidermis appeared to be normal. In two cases of alopecia areata in Negroes, pigment in the bald areas was absent or was diminished as compared with scalp from adjacent hairy areas.

In the dermis there was a constant inflammatory change composed of lymphocytes related to the hair follicles and blood vessels, and in some instances related to sebaceous and sweat glands but in a lesser degree. The perivascular inflammatory changes persisted irrespective of the duration of the baldness, and was observed in cases of eight months' to two years' duration. This inflammatory change persisted even in areas of beginning regeneration or regrowth of hair.

In all cases there was a relative or absolute absence of robust hairs in the areas of alopecia. This comparison was based on examination of tissue from diseased and healthy portions of scalp from the same patient. It was surprising to note that even those adjacent areas of the scalp, considered as healthy, showed a degree of inflammatory change in relation to the blood vessels and hair follicles, which could not be explained.

Inconstant changes were observed in some of the cases. One of them was a degree of fibrosis at varying levels in the cutis in relationship to the follicle. Likewise, we observed an apparent superficial position of the sebaceous glands in cases in which there was no identifiable active formation of hair.

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Biliary Tract Anomalies

The Utilization of Modern Techniques in Differential Diagnosis

DANIEL M. HAYS, *M.D.*, Los Angeles

• The diagnostic aids used in dealing with biliary disease in adults were applied to the study in infants of the principal congenital anomalies of the biliary tract such as choledochal cyst, biliary atresia and biliary stenosis.

Choledochal cysts were distinguished from other upper abdominal masses occurring in childhood by the use of intravenous cholecystography.

Since the clinical manifestations in infants with biliary atresia or stenosis are almost identical to those associated with the obstructive phase of neonatal hepatitis, the problem of differentiation is difficult. The serial total serum bilirubin curve, a careful analysis of the pigment content of feces and urine and duodenal intubation for bilirubin determinations were found to be useful in making the distinction. Operative cholangiograms were helpful in some cases. Frozen section examinations of liver tissue during operation were of little value except to demonstrate certain unusual cases of intrahepatic biliary atresia. Routine liver function studies, including serum transaminase determination in a limited number of cases, did not help in differentiation.

ALTHOUGH COMMON in adults, biliary tract disease is relatively rare in infancy and childhood, consisting largely of anomalies of the structures and complications therefrom. Hence, except in large pediatric centers, the number of cases is so small that it is quite difficult to make an accurate appraisal of the applicability to children of the techniques that have been developed in adults for recognizing and dealing with these conditions.

The purpose of this communication is to analyze the use of these diagnostic methods on pediatric patients at the Los Angeles Children's Hospital and the Los Angeles Harbor General Hospital. A more detailed evaluation of the statistical data and roentgenological techniques employed has been previously published.[3,5]

Idiopathic Dilatation of the Common Bile Duct

For roentgen studies, 20 per cent sodium iodipamide (Cholografin) was injected intravenously in three children with large subhepatic masses suggestive of idiopathic choledochal dilatation or "choledochal cyst." In one patient such a cyst was repeatedly outlined on films taken between 30 and 120 minutes following injection. The volume of this structure, which had a diameter of more than 15 centimeters, did not cause so much dilution as to prevent a clear delineation of its border. In the two other children, distortion of the biliary tree, including the common duct, hepatic duct and gallbladder, clearly outlined an intrahepatic mass—a hepatic cyst in one patient and a hepatoma in the other. A correct preoperative impression of the nature of the lesion was obtained in both these patients.

Extrahepatic and Intrahepatic Biliary Atresia And Biliary Stenosis

Approximately 95 per cent of infants with protracted neonatal jaundice have Rh or ABO incompatibility, congenital hemolytic jaundice, systemic or localized specific infections, congenital metabolic defects or hepatic prematurity. Diagnosis of such conditions is usually well established during the first month of life and almost always before the sixth week. In most of the remaining 5 per cent, jaundice is of an "obstructive" type and ordinarily the cause is ascribed to biliary atresia or biliary stenosis during the second month of life. Yet at least one-third of these patients do not have any mechanical obstruction of the biliary tree. This group includes infants previously classified as showing "inspissated bile-plug syndrome" and "bile-plug syndrome of unknown cause," in contrast to cases secondary to hemolytic disease, and "giant cell hepatitis." The general descriptive term "neonatal hepatitis" seems preferable for clinical purposes, as evidence seems to indicate that the clinical manifestations may be the result of any of several pathological processes,[2,6] none of them fully understood. Distinguishing these conditions from the larger group caused by biliary atresia is the major diagnostic problem in jaundiced patients in this age group.

It should be noted that in these two groups—patients with biliary atresia and those with the "neonatal hepatitis syndrome"—the clinical histories and the physical findings are remarkably similar.[5] Routine hepatic function studies, so useful in adults,

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From the Los Angeles Children's Hospital and the Los Angeles Harbor General Hospital.

Submitted August 18, 1958.

have been of little value in making such differentiation in children. Between the fourth and eighth week of life, the period in which differentiation is of the greatest practical value, the results of standard tests and determinations such as alkaline phosphatase, cephalin flocculation, thymol turbidity and serum cholesterol, are predominantly those of "obstruction."

Kove[4] reported that serum transaminase (oxalacetic to glutamic) determinations were helpful in differentiation, but in a limited number of cases in the present study these tests were disappointing. Since adults with purely obstructive jaundice usually have relatively low transaminase levels, one might assume that similar levels would be obtained in patients with biliary atresia, while a somewhat higher level might be expected in infants with neonatal hepatitis. However, in 16 serum transaminase determinations among patients of both groups in the present series, no level higher than 148 units was obtained. In general, the children with proven biliary atresia had slightly higher transaminase levels than those with neonatal hepatitis, but in all cases the levels were within normal range (less than 110 units) or only slightly elevated.

Serial, usually weekly, determinations of liver function by routine tests are often employed in the study of jaundiced adults. In the present series of pediatric cases, the total serum bilirubin levels, determined at weekly intervals and plotted as a curve over a four-week period, were unquestionably the most helpful liver function study used. The determination should be started at the third or fourth week of life if possible. In 11 of 13 cases in the neontal hepatitis group in which such curves were plotted, there was a definite decline during the observation period. In contrast, eight of ten patients with biliary atresia either had no decline or a definite rise. The range of serum levels was also higher in the patients with biliary atresia. By the second week of the study, the average total bilirubin content in the group with biliary atresia was above 8 mg. per 100 cc. of serum, while at the same time it was below 6 mg. per 100 cc. in children who ultimately were proven to have neonatal hepatitis.

Clinical studies of urine and feces in patients with biliary atresia (during the early months) reveal urine containing bilirubin but no urobilinogen and feces without bilirubin or similar pigments. Unfortunately, about 60 per cent of the infants in the neonatal hepatitis group have similar findings. However, in the children in whom departure from this pattern was observed, even when transient, delay of surgical intervention usually resulted in an eventual correct diagnosis.

Intubation of the duodenum for the purpose of obtaining cholesterol crystals is a standard diagnostic procedure in adults. In infants this is more difficult to accomplish; usually fluoroscopic visualization is necessary for guiding the tube, and the procedure is carried out for a different purpose—namely to ascertain the presence or absence of bilirubin in the duodenal content. Among nine infants so studied in the present series, four in whom no bilirubin was detectable ultimately were proved to have biliary atresia.

With 20 per cent sodium iodipamide given intravenously for a contrast medium, none of the biliary tree could be visualized in patients with biliary atresia even though dosages were increased to 1.2 cc. per kilogram of body weight. In two patients with neonatal hepatitis, filling of the gallbladder with this material was observed roentgenographically. However, in one of these children clinical clearing of the jaundice was already progressing at the time of the study. In six other infants in the neonatal hepatitis group, no visualization was obtained.

In several cases of biliary atresia, operative cholangiography, using injected contrast media (Diodrast), was helpful in outlining some portion of the biliary tree. In five patients with neonatal hepatitis in whom this was attempted, an intact extrahepatic biliary system was visualized.

Examination of frozen sections of the liver has not been found a reliable method of differentiating between biliary atresia and neonatal hepatitis. However, if in several sections there is a complete absence of biliary ducts, the diagnosis of complete absence of the intrahepatic system, as described by Ahrens,[1] is suggested.

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Frozen Shoulder

Methods for Bringing About Early Mobilization

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• Frozen shoulder, rare in the young but more easily incurred after age 40, is a result of immobilization from any cause. Atrophy is the first phase, followed by shortening of soft tissues, pain on extension, spasm contractures and adhesions.

Mobilization is urgent to prevent contractures. Rotation is the most important exercise, and should be done with the upper arm supported in nearly horizontal extension to prevent the humeral head from impinging on the acromion. From this position the forearm, lifting or pulling down in a forward arc against weights and pulleys, restores the rotatory power of the shoulder.

"FROZEN SHOULDER" is fundamentally a symptom resulting from immobilization due to any of a number of causes. Regardless of the cause, motion at the glenohumeral joint is restricted both in rotation and in elevation. Muscular weakness arises secondarily from atrophy of disuse and also from the fact that muscles lose some of their power in attempting to work in an adapted shortened position.

In younger persons, frozen shoulder usually follows severe trauma or unusually prolonged immobilization or inflammation of shoulder structures. In persons beyond 40 years of age the condition may arise from milder causes. It may be accompanied by various degrees of degeneration of the shoulder-joint synovia, the biceps tendon and the musculotendinous cuff. Any pain or trauma leading to immobilization, or even immobilization alone, can lead to frozen shoulder.

Intrinsic causes of frozen shoulder include:

1. Bicipital tendonitis.[6]
2. Calcific tendonitis.[1]
3. Inflammatory bursitis.[3]
4. Rupture of the supraspinatus tendon.[1]
5. Trauma to the shoulder joint:
    a. Direct—fractures, sprains, contusions, and dislocations. Repeated microtrauma.
    b. Indirect—transmitted as in a fall on an outstretched arm.

Extrinsic causes, fundamentally secondary to immobilization, include:

1. Trauma to the arm.
2. Mastectomy.
3. Cardiac operations.
4. Thoracoplasty.
5. Scar tissue from surgical operation or burns.
6. Radicular pain.
7. Brachial plexus injury.
8. Coronary disease—shoulder-hand syndrome.
9. Spastic hemiplegia.
10. Debilitating pulmonary or metabolic disease.

Besides the shortening of soft tissues and the secondary muscular atrophy, a certain degree of spasm usually results from the pain, and causes muscle shortening. If this shortening continues it can eventually result in contracture or in permanent irreversible shortening due to structural changes in the tissues. It must be remembered that the other joint structures, such as the capsules and the coracohumeral ligament, also are involved in the shortening, and there may also be adhesions, both intracapsular and extraarticular.

De Palma[2] thus describes the chain reaction resulting from functional activity: "Muscle tone is diminished, and muscle atrophy supervenes. The normal delicate balance of the metabolic processes of the tissues is disturbed, and there follows a slowing down in the circulation and venous and lymphatic stasis. All soft tissues adjacent to and comprising the musculotendinous cuff become saturated with serofibrinous exudates which provide the fibrin responsible for formation of capsular, synovial, fascial, intermuscular and intramuscular adhesions. A low grade chronic inflammatory process ensues which involves all the tissues affected." These effects may be reversed by early functional activity.

Unless reversed early, shoulder immobilization may reach a point at which pain no longer occurs unless movement is attempted. The pain at this stage is due to attempted stretching of the tight contracted tissues.

The most common symptoms of frozen shoulder

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are: shoulder pain, particularly felt at night in lying on the affected side; tenderness about the shoulder, particularly over the biceps tendon; in other cases no tenderness at all, but deep pain in the shoulder; radicular symptoms of pain and paresthesias in the hand; parascapular and cervicodorsal symptoms.

In some cases the muscular involvement becomes widespread and leads to symptoms around the scapula and in the cervical and thoracic spinal area. These, in turn, may give rise to secondary radiculitis. Often it is these secondary tissue alterations which require treatment, as the primary condition may have been self-limiting.

TREATMENT

The most urgent need in treatment is to mobilize joints before contractures develop. Early mobilization, which frequently will shorten the period of convalescence and prevent the formation of a rigid frozen shoulder, can be carried out in practically every predisposing condition except non-impacted fracture or severe infection. The use of such devices as ultrasound, heat and electrical stimulation depends on the predisposing factors and the extent to which the condition has progressed.

The normal scapulohumeral ratio is 1:2—that is, for every degree the scapula moves the humerus moves two.[5] Since this ratio is disturbed by loss of movement at the scapulohumeral joint, attempts to compensate by increased range of scapular rotation may give rise to pain over the inferior angle of the scapula where the attachment of the latissimus dorsi may be strained.[4] Since the greatest degree of shortening occurs in the rotators, prime emphasis must be placed on restoring rotation because: (1) lateral or external rotation is necessary in elevation, lest the greater tuberosity impinge on the acromion; (2) the rotators act to depress and fix the humeral head in the glenoid cavity (one of the characteristics of this disorder is the elevating of the shoulder as the head of humerus rides high in the glenoid).

Mobilization of the shoulder can be achieved by passive stretching exercise, but because of the pain it is frequently advisable to use methods partly under the patient's control. Purely passive stretching in a forceful manner may increase pain and consequently muscle spasm. Useful methods include pulley therapy, spring therapy, countertraction, Codman exercises and the use of an apparatus to obtain shoulder rotation.

While shoulder wheels of various types have been devised, those in common use have a fundamental disadvantage: It is frequently impossible for the patient to make a complete cycle because during the upswing the greater tuberosity impinges on the acromion.

The author therefore has developed a different technique for exercising internal and external rotation of the shoulder. This method can be used in addition to resistive exercises and countertraction.

The patient's upper arm, extended laterally at less than 90° of elevation, is strapped to a standard in such a way that the humeral head is depressed and impingement on the acromion is less likely to occur. In this position he swings the forearm in a forward arc, pulling on a weighted cord—either forward and down from an overhead pulley or backward and up from a lower pulley. In swinging downward against the weight, he develops strength in the internal rotators in a resistive manner, and in the return motion the countertraction of the weight provides an assistive stretching force on the internal rotators. In the lifting exercise with the lower pulley the converse occurs to the external rotators.

Experience in the therapeutic measures used in the treatment of frozen shoulder has demonstrated that it is not the use of one modality but the combined effect of a number of modalities, that brings about the desired result. The analgesic and tissue-softening effects of heat, massage and ultrasound may be indicated before the exercises. Also it may frequently be wise to repeat the analgesic effects of heat after the active phase of the treatment.

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An Intermediate Psychiatric Facility

The Usefulness of a Place for Treatment Between Hospital and Home

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• A new kind of psychiatric facility to deal with patients returning to their community from a state hospital or with patients newly ill and treatable locally, combines a number of features in the interests of economy and enhanced effectiveness. Its economy arises from: (1) The exclusion of bed-patient and security-ward care for patients not in need of them; (2) a shortened hospital stay resulting from rapid treatment procedures (electroconvulsion, brief psychotherapy and drug therapy); (3) a flexible shifting to outpatient or day care as soon as practicable. Enhanced effectiveness of therapy arises from earlier discharge from state hospitals, earlier treatment of patients from the community, as well as comprehensive utilization of multiple therapeutic modalities.

In dealing with mental illness, there is a trend away from hospitalization and toward treatment of the patient in his normal milieu. This trend is based on a new appreciation of the psychological support found in familial surroundings and daily living routines, but is also the result of a more effective set of therapies. Therapeutic lag—the failure of practice to keep abreast of new advances—is costly both in terms of health and money. The psychiatric facility to be described takes advantage of these advances with enhanced effectiveness and new economies.

The psychiatric hospital is expensive mostly because of the bed-patient and security-ward care that it supplies. Modern therapies are making this kind of care progressively less necessary. Patients not needing it can be treated less expensively, and often more effectively, in other facilities. Some of the factors involved are:

1. Building and personnel costs for traditional psychiatric hospitals are from two to four times as great as for facilities not supplying bed-patient and security-ward care.

2. Use of facilities of the latter type, located in the patient's community, permits earlier discharge from state hospitals and better rehabilitation opportunities.

3. Availability of electroconvulsive therapy, drug therapies and brief psychotherapy in such facilities not only maintains therapeutic continuity for patients who might otherwise need to return to the state hospital because of unpredictable relapses, but also permits initial treatment of patients from the community, often making state hospital care unnecessary.

4. Outpatient electroconvulsive therapy and day-care programs still further reduce the number of inpatient days.

The essential elements therefore of the facility to be described are: (1) Its location in the community; (2) absence of bed patients; (3) absence of security wards; (4) a full complement of therapeutic modalities, including rehabilitation (long-term intensive psychotherapy or psychoanalysis are not included); (5) flexible interchange of inpatient, day-care and outpatient programs, which reduces hospital stay to a minimum.

Such a facility, Gateways, was founded by the Jewish Committee for Personal Service,* an agency which 35 years ago pioneered in social services to residents of state hospitals and penal institutions. Although these institutions now have their own social workers, J.C.P.S. still maintains contacts between patients and relatives before, during and after intramural care. It became apparent to the director of J.C.P.S. that a facility to house patients discharged from state hospitals, as an aid to their rehabilitation, would serve a useful purpose. Such a facility was established and called Gateways.

It was known that some former hospital patients do relapse. For many of them, one or a few electro-

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*The Jewish Committee for Personal Service, one of the agencies of the Los Angeles Federation of Jewish Welfare Organizations, was organized in 1923. At a later date, Dr. Aaron Rosanoff, noted psychiatrist, had many discussions on the desirability of a home-care program as a function of the J.C.P.S., of which he was then president. After he was appointed Director of State Institutions in California he took with him the Director of J.C.P.S., Nathan Sloate, to establish the family care program for the state mental hospitals. This expanded greatly and set the pattern for other states. In keeping with its tradition of promoting advanced programs not yet incorporated into governmental agencies, the J.C.P.S. decided to conduct the pilot experiment described herein.

convulsive treatments can overcome the relapse. Therefore, it was planned at the outset that such treatments be made available on an inpatient and outpatient basis in Gateways. This could be done with essentially the same minimal overhead expenses. These services could also be extended to suitable patients in the community who had not gone to state hospitals—perhaps making such an eventuality unnecessary.

Gateways began in 1954 with ten beds in metropolitan Los Angeles. It was designed to receive mental patients, both from state hospitals and the community, who might be restored to normal community living by minimal care. Only patients who require no confinement to bed and no security-ward provisions have been accepted. Patients requiring electroconvulsive therapy remain in bed for one or two hours in a special treatment room separated from the main building.

Patients are admitted from state hospitals irrespective of the kind of mental illness. The sole criterion is the ability to profit from a short stay in a rest home environment while completing plans for readjustment into the community. Among patients from the community, those with psychotic depressions form the largest group. The maximum period of stay is fixed at two months. Indigent patients are treated without charge; others are "part pay." Somatic therapies (drug and electroconvulsive) and the short-term psychotherapies (individual and group) are included. The flexible character of the program permits patients to be in the hospital for short periods and to be observed subsequently as outpatients, or to be treated as outpatients or day patients from the beginning. Each patient admitted is examined by a psychiatrist to ascertain that his needs do not exceed the services available.

The professional personnel at first included a half-time psychiatrist, a graduate nurse and two undergraduate nurses, two social workers, four part-time volunteer psychiatrists and a board of consultant medical specialists. Later a second half-time psychiatrist, a full-time psychologist and a full-time occupational therapist were added to the staff. The bed capacity has been increased from 10 to 24. There has always been a large corps of women volunteer workers. A recent donation of a quarter of a million dollars to the agency makes further expansion a reality.

The merit of an intermediate psychiatric facility of this kind is that it cares for certain unfulfilled needs, meets many needs more effectively than out-of-town hospitals and results in considerable savings. It is not intended to displace the traditional mental hospital, but it should reduce the number of such hospitals.

For the recovering state hospital or ex-hospital patient, Gateways provides a valuable transition back into community living. Ready access to the community, guidance by trained staff with case work and short-term psychotherapeutic techniques, drug therapies when necessary and flexible interplay of inpatient, day-care and outpatient programs —all together maintain a continuity in rehabilitation not equalled otherwise. For the patient previously treated with electroconvulsion the availability of the facility for relapses or maintenance therapy often prevents return to the state hospital.

In customary rehabilitation homes* without these aids, patients often have to return to the state hospital for single or widely spread treatments. Without the local availability of electroconvulsive therapy, patients are not released from state hospitals as early as they might otherwise be. The need to ascertain whether the patient is free from a relapsing tendency causes the hospital to keep the patient for one or more months after he appears to be recovered. Earlier release to a halfway house like Gateways may be a way of determining whether an occasional treatment or further support is necessary (in many cases a decision that cannot be adequately ascertained until the patient is released into the community). A facility like Gateways therefore makes possible earlier and more satisfactory trials at rehabilitation and avoids the frustration and failure often occasioned by relapse.

Most communities supply no outpatient electroconvulsive therapy except privately. Although there are several private psychiatric facilities where ambulatory patients can receive such treatments, there is no community resource in Los Angeles giving this service other than Gateways. Psychiatric hospitals in the community—or psychiatric units in general hospitals—rarely have the facile interplay of outpatient and inpatient care available at Gateways.

For the patient from the community the same advantages obtain as for the former state hospital patient. An additional advantage is that state hospital care may be obviated. Often the patient comes for treatment earlier because he is less likely to feel stigmatized. Earlier care sometimes can shorten the course of treatment. The actual number of hospital days is also usually reduced because of the availability of day-care and outpatient programs as soon as inpatient care is no longer necessary. In many cases outpatient therapy alone suffices. Electroconvulsive therapy under these conditions has often saved patients their jobs, prevented disorganization of careers and avoided disruption of families. Such tragic consequences of longer state hospitalization are well known. Earlier treatment also prevents a number of deaths from suicide.

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*Such "halfway houses" operated by nonprofessional personnel are based on the supposition that state hospital patients discharged to them are recovered and have no relapsing tendencies, although this frequently is not so and is something that cannot be predicted in individual cases.

In addition to the foregoing enhanced services, the two-way house like Gateways is more economical. It replaces much more costly mental hospitals for a segment of the psychiatric patients and it can care for patients less expensively. There is a reduction of the initial building costs ($5,000 in contrast to $20,000 per bed) and a reduction in personnel and operating costs. Because of both outpatient and day-care programs, the number of hospital days is reduced. The cost to Gateways is $200 per patient for the average span of treatment. This compares favorably with the cost per patient in other psychiatric agencies. In one community agency the cost per patient is $2,000 a year and the therapy may extend beyond one year. In private practice, the cost for services comparable to those at Gateways is from $600 to $1,500.

The savings to the patient, his family and society also go beyond the matter of hospital costs. There is the shortening of the period of unemployment of the patient, and, as was said before, at times the preservation of a job without interruption. The economic gains are reflected in personal rehabilitation and social benefits as well. A midway home like Gateways has many merits to recommend its duplication in communities throughout the world.

At Gateways priority is given to procedures which help the largest number with the least expense. Priority is also given to patients whose suffering can be remitted quickly by these economical procedures.

Gateways is able to make its contribution to mental care by selecting patients who respond to rapid treatment and who do not require bed and security-ward care. Actually, the therapeutic modalities at Gateways include nothing new—merely a more efficient utilization of familiar techniques in special circumstances.

In no small part the achievements of Gateways are based on commitment to the rapid treatment techniques on an outpatient as well as inpatient basis. Psychiatrists differ widely as to their confidence in shock therapy, brief psychotherapy and drug therapy. Some of them even believe that an inherent irreconcilability exists between the various modalities mentioned and long-term intensive psychotherapy, including psychoanalysis. Actually there are no dichotomies among the various psychiatric techniques. Each is a different modality, a different tool. Each has its indications and contraindications, each its merits and its deficiencies.

Suffice it to say that unless one has an open mind to the value of the rapid treatment techniques and the flexibility of their utilization on an outpatient as well as inpatient basis, the merits of a program like Gateways will not be visualized. Its effectiveness, easily verified, is the practical answer to the skepticism of psychiatrists of varying therapeutic philosophies. Gateways has been constantly filled and is continually expanding.

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Seizure Problems in 250 Cerebral Palsied Adults

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• Seizures occurred at some time in 81 (or 32 per cent) of an unselected, consecutive series of 250 cerebral palsied persons between the ages of 16 and 52 years, an incidence similar to that reported by other investigators in groups of cerebral palsied persons who were mainly children.

The incidence of seizures of any kind after 16 years of age in the present series was 10 per cent as compared with 0.5 per cent in the general population. Half of the 10 per cent had more than six convulsions despite drug therapy, and the other half had fewer than six.

Of thirty-six who had convulsions in the neonatal period, only four had seizure problems as adults, even though most showed moderate to severe physical handicap after age 16.

Data on the small group of paraplegics in the present study, all spastics, were in accord with reports by other investigators with regard to decreased incidence of seizures in cerebral palsied patients with normal upper extremities. Of the thirteen (5 per cent of the 250) whose seizure problems continued to be clinically significant in adult life, ten had had frequent seizures in childhood. Eight were hemiplegic. There appeared to be no relationship between the severity of physical handicap and the incidence of seizures after age 16.

Because the incidence of convulsions in cerebral palsied children is reported to be between 32 per cent[2] and 47 per cent,[6] review of the seizure problem in adults with cerebral palsy is important for individual and community planning for these patients. This report presents data regarding seizure problems occurring in a group of 250 cerebral palsied persons between 16 and 52 years of age. This unselected group comprises the total number evaluated at the Vocational Training Center, United Cerebral Palsy Association of Los Angeles County, between February 1954 and June 1957.

Data from the history, as given by the patient and/or his family, showed that 32 per cent (81 of the 250) had had one or more convulsions. No attempt has been made in this report to differentiate the types of seizures other than to indicate any known focal elements, as the histories were not detailed enough to give this information accurately. The group consisted of 158 males and 92 females; of these, 53 males and 28 females gave a history of seizures.

For the purpose of this study, patients were divided into groups according to age at occurrence of convulsions as shown in Table 1.

Approximately one-third (26) of the 81 who had had convulsions at some time during childhood continued to have a seizure problem after 16 years of age. In no case did seizures begin after 16 years of age.

In reviewing the group whose seizures occurred in the neonatal period only (Table 2) it was noted that there were abnormal natal factors in all but one case. Abnormal natal factors included a history of trauma, respiratory difficulty, neonatal limpness or rigidity, and other findings which appeared to be of sufficient significance to suggest central nervous system damage.

Despite the fact that seizures occurred only during the neonatal period, sixteen of the eighteen patients later showed moderate to severe quadriplegic physical involvement. Only one was born prematurely.

TABLE 1.—*Data on Continuance of Epileptic Seizures in a Group of Cerebral Palsied Adults Who Had Had Seizures Before Age 16*

		Number of Patients
Seizures before Age 16 years		81
I. Before 16 years of age only		55
Neonatal only	18	
Birth to 6 years	25	
Birth to 16 years	12	
II. Continued after 16 years of age		26
Occasional seizures	13	
Many seizures	13	

Table 3 shows that, excluding those with seizures in the neonatal period only, twenty-five reported no fits after the first six years of life.

In the patients who had seizures between birth and six years of age (Table 3), the proportion considered to have had abnormal natal factors (14 of 25) was a little more than half, compared with 92 per cent in the group with seizures limited to the

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TABLE 2.—*Patients with Seizures Limited to Neonatal Period (Birth to One Month)*

(Total number, 18)

	Incidence
Cause:	
Prenatal factors	0
Natal factors	17
Postnatal factors	1
Unknown	0
Extent of handicap:	
Paraplegia	1
Hemiplegia	1
Triplegia	0
Quadriplegia	16
Severity of physical handicap:	
Mild	2
Moderate	8
Severe	8

neonatal period. Again quadriplegics predominated with roughly equal numbers being mildly, moderately and severely involved physically. Convulsions usually occurred infrequently, and often were associated with a febrile illness. They were focal in one patient only. Thirty-six per cent of the patients in this group were born prematurely. Premature birth occurred more often in this group than in any other (nine of a total of seventeen prematures in this series), and most of the very small prematures were included in it.

Omitting the groups with seizures in the neonatal period only and also those whose seizures ceased by age six, twelve patients reported convulsions continuing to some period between six and sixteen years (Table 4). Natal abnormality was noted in the majority, and the entire group appeared to have had damage of the central nervous system from the time of birth. None had illness or accident after birth as a causative factor. All but one were quadriplegic, and ten were moderately or severely involved physically. Half were estimated to have had more than six seizures. Again a small proportion, three of the twelve, had seizures in the neonatal period. Three were born prematurely.

Of the patients reporting only occasional convulsions after 16 years of age (Table 5), half had a history of some abnormality during the natal period; ten of the thirteen probably were affected from birth. None had been born prematurely. Five were hemiplegic, a proportion greater than in any of the preceding groups, although the majority had all four extremities affected. Most were moderately involved physically. Four, or approximately one-third, reported focal episodes, and over one-half had more than six seizures. Of these, three had them frequently in childhood.

TABLE 3.—*Patients with No Seizures After Six Years (Excluding Those with Neonatal Seizures Only)*

(Total number, 25)

	Incidence
Cause:	
Prenatal factors	1
Natal factors	14
Postnatal factors	4
Unknown	6
Extent of physical handicap:	
Paraplegia	2
Hemiplegia	2
Triplegia	3
Quadriplegia	18
Severity of physical handicap:	
Mild	7
Moderate	11
Severe	7
Number of seizures:	
Few*	24
Many*	1

*Few = Fewer than six. Many = Six or more.

TABLE 4.—*Patients 16 Years of Age and Over with Seizures, Not Including Those Whose Seizures Ceased by 6 Years of Age*

(Total number, 12)

	Incidence
Cause:	
Prenatal factors	1
Natal factors	8
Postnatal factors	0
Unknown	3
Extent of physical handicap:	
Paraplegia	0
Hemiplegia	1
Triplegia	0
Quadriplegia	11
Severity of physical handicap:	
Mild	2
Moderate	5
Severe	5
Number of seizures:	
Few*	6
Many	6

*Fewer than six seizures.

Of those having many seizures either with or without medication after 16 years of age (Table 6), about half appeared to have had natal abnormalities or were thought to have had central nervous system damage from birth. Three of the thirteen were born prematurely. Many were hemiplegic and moderately involved physically. The number of cases judged due to postnatal causes, five of thirteen, was proportionately greater than in any of the other groups. No paraplegics in this series had seizures after 16 years of age. In this group, those with natal and postnatal etiological factors, ten of thirteen, had very many seizures in childhood. Only one person in this group had neonatal seizures. In all patients convulsions were a continuing problem, rather than one that had not begun until adult life. In seven of the thirteen the seizures were thought to be focal.

TABLE 5.—*Patients with Occasional Seizures Continuing After Age 16*

(Total number, 13)

	Incidence
Cause:	
Prenatal factors	0
Natal factors	7
Postnatal factors	2
Unknown (present from birth, 3)	4
Extent of physical handicap:	
Paraplegia	0
Hemiplegia	5
Triplegia	0
Quadriplegia	8
Severity of physical handicap:	
Mild	4
Moderate	8
Severe	1
Number of seizures:	
Few	5
Many (but only occasional after 16 years)	8

Comparing the group having seizures only before 16 years of age (Group I, Table 7) with the group whose seizures continued after 16 years (Group II), suggests certain trends. Relating seizure incidence to possible cause of the central nervous system damage, we find natal abnormality in 39 of 55 (70 per cent) in Group I, and in 12 of 26 (46 per cent) in Group II. Group II shows a proportionately greater number with postnatal factors than Group I; focal seizures appeared to be more frequent in Group II also; the incidence was 5 of 55 in Group I and 7 of 26 in Group II.

The topographical distribution of physical handicap (Table 8) shows no paraplegics in the second group, and a considerable increase in the proportion of hemiplegics in Group II. Of the seventeen hemiplegics, twelve reported natal problems as a possible etiological factor, and five were thought to result from illness or accident in the postnatal period. The high proportion of quadriplegics in the first as compared with the second group is noteworthy.

The severity of the physical handicap did not vary widely in the two groups (Table 9). There were relatively more seizures in childhood than in adult life in the group having severe physical involvement. Thus the disabling factor in these severely involved cerebral palsied adults was more often due to the physical handicap than to the convulsive problem.

TABLE 6.—*Patients with Many Seizures Continuing After Age 16*

(Total number, 13)

	Incidence
Cause:	
Prenatal factors	1
Natal factors	5
Postnatal factors	5
Unknown (present from birth, 1)	2
Extent of physical handicap:	
Paraplegia	0
Hemiplegia	8
Triplegia	2
Quadriplegia	3
Severity of physical handicap:	
Mild	1
Moderate	9
Severe	3
Number of seizures:	
Few	0
Many	13

TABLE 7.—*Seizures Correlated with Causes in Two Groups of Cerebral Palsied Adults, One with Seizures Ending Before Age 16, the Other with Continuing Seizures*

Etiology	Group I Seizures Under 16 Years Only	Group II Seizures Continuing After 16 Years
Prenatal factors	2	1
Natal factors	39	12
Postnatal factors	5	7
Unknown	9	6
Totals	55 (focal, 5)	26 (focal, 7)

TABLE 8.—*Seizures Correlated with Extent of Physical Handicap in Two Groups of Cerebral Palsied Adults, One with No Seizures After Age 16, the Other with Continuing Seizures*

Extent of Physical Handicap	Group I Seizures Under 16 Years Only	Group II Seizures Continuing After 16 Years	
Paraplegia	3	0	
Hemiplegia	4	13	
Triplegia	3	2	
Quadriplegia	45	11	
Totals	55	26	81

Table 10 indicates the difference in the incidence of seizures for each clinical type of cerebral palsy in the two groups. In the group with convulsions continuing after age 16 years, there was a decided preponderance of spastics (18 of 26), and thirteen of the eighteen spastics in this group were hemiplegics. Of patients showing some form of abnormal motion (athetosis, rigidity, tremor, etc.), the majority (28 of 33) had convulsions during childhood only.

DISCUSSION

According to Brain,[1] the incidence of epilepsy in the general population is 0.5 per cent. He noted Patrick's and Levy's report of infantile convulsions occurring in 4 per cent of normal children. Thom[8] reported a 7 per cent incidence. That is, one child in every 14 to 25 has a seizure at some time, as compared with one adult in every 200.

The incidence of convulsions at one time or an-

TABLE 9.—*Seizures Correlated with Severity of Physical Handicap in Two Groups of Cerebral Palsied Adults, One with No Seizures After Age 16, the Other with Continuing Seizures*

Severity of Physical Handicap	Group I Seizures Under 16 Years Only	Group II Seizures Continuing After 16 Years	
Mild	11	5	
Moderate	24	17	
Severe	20	4	
Totals	55	26	81

TABLE 10.—*Incidence of Clinical Types of Cerebral Palsy in Two Groups of Cerebral Palsied Adults, One with Seizures Before Age 16 Only, the Other with Continuing Seizures*

Clinical Type	Group I Seizures Under 16 Years Only	Group II Seizures Continuing After 16 Years	Total
Spastic	22	18	40
Dyskinetic	28	5	33
Ataxic	0	0	0
Others	5	3	8
Totals	55	26	81

TABLE 11.—*Incidence of Seizures After Age 16 Correlated with Degree of Physical Handicap (250 Cerebral Palsied Adults)*

Degree of Physical Handicap	Total Number	Number Having Seizures After Age 16
Mild	65	5
Moderate	117	17
Severe	40	4
Unclassified	28	0
Totals	250	26

other in the group of cerebral palsied adults in this study (32 per cent) was lower than the 47 per cent incidence reported by Perlstein, Gibbs and Gibbs[6] in a series of 1,500 cerebral palsied patients, aged three months to 20 years, but was close to the 35 per cent noted by Wishik.[9]

If the ratio of child to adult incidence of seizures in cerebral palsied persons were the same as that reported in the general population (namely 0.5 per cent in adults against 4 to 7 per cent in children), one would expect, statistically, that 2.3 to 4 per cent of the 250 adults in this study would have had seizures after 16 years of age; the actual incidence was 10 per cent, half having only occasional seizures and half having many poorly controlled convulsions.

Perlstein, Gibbs and Gibbs suggested that this relatively greater persistence of seizures into adult life among the cerebral palsied persons as compared with unselected epileptics is due in part to the much higher incidence of petit mal in unselected epileptics (50 per cent) than in cerebral palsied (1.6 per cent) and the tendency for petit mal to disappear after adolescence. Studies of the electroencephalographic patterns in this series of 250 cerebral palsied adults are currently being carried out. These studies to date indicate a very low incidence of petit mal. Unfortunately, the histories available are not sufficient to serve as a basis for clinical diagnosis of type of seizures. The majority of those with many seizures after age 16 had frequent seizures in childhood.

Penfield and Jasper[5] said that "convulsive seizures which occur during the acute reactions to operative or traumatic brain lesions are of little significance with regard to the future development of habitual seizures." In this series, only four of thirty-six having neonatal convulsions reported episodes at a later date, whereas many of those having neonatal abnormality without neonatal convulsions did have episodes later. Could this indicate that seizures *per se* in the neonatal period are of little prognostic significance as to the problem of epilepsy later in life? They may be of considerable importance as an indication of later physical abnormality, since most of the patients in this series who had only neonatal seizures were later found to be moderately to severely physically handicapped.

Brain[1] cited Patrick and Levy's data that 40 per cent of epileptics had a history of "infantile convulsions." In 12 of the 26 epileptic cerebral palsied adults in the present study, the onset of seizures was under age six.

Perlstein and Hood[7] found 43 per cent of 334 infantile spastic hemiplegics to have seizures. In the present series, seventeen of the forty hemiplegics had such episodes, a similar proportion. Of these seventeen, thirteen continued to have a seizure problem after 16 years of age. In four of the thirteen cases the seizures were due to postnatal causes.

Merritt[3] said, "The frequency of convulsive seizures in organic diseases of the central nervous system is not directly related to the severity or degree of cerebral damage." This view appears to be confirmed in the present series, as shown in Table 11. Seizure problems did not appear related to the severity of the physical handicap.

On comparing the characteristics of this group of 250 adults with 1,287 cerebral palsied children seen at three cerebral palsy diagnostic clinics in Los Angeles County,[4] it was found that the patients in the two series were very similar as to type, degree and extent of physical handicap, incidence of seizures and intelligence. Therefore, this unselected series of 250 adults can be said to be roughly comparable to the child population seen at diagnostic clinics in Los Angeles County.

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Suicide Problems in Medical Practice

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• Increasing awareness by physicians in general medical practice of the possibility of suicide in nonpsychiatric patients is indispensable for the evaluation of suicide risk and for a practical approach to the problem of prevention.

An analysis was made of the records of 11 cases of suicide by medical and surgical patients who were in a general nonpsychiatric Veterans Administration hospital for evaluation and treatment of physical disease.

It was noted that the general hospital staff had a low index of suspicion of the possibility of suicide in general hospital patients.

It appeared from this study that there is a definite suicide risk in older persons hospitalized for physical illness who develop psychotic reactions during the course of their illness and hospitalization. The signs and symptoms of toxic and organic psychosis in these older patients were not recognized and their significance relative to suicide risk was not appreciated. Although psychiatric signs of severe emotional disturbance appeared clinically obvious at least 24 hours before suicide in ten of the eleven patients, no suicide risk was considered present, nor were adequate precautions taken by the hospital staff. This was owing to the lack of psychiatric orientation among the nonpsychiatric physicians.

In the evaluation of a five-year review of suicide in a Veterans Administration hospital revealing that 11 patients killed themselves while patients in a general hospital, it became apparent that suicide occurs in medical settings more frequently than has been previously recognized, acknowledged or reported. This implies a need for physicians to become more aware of clinically observable psychiatric features in "nonpsychiatric" patients which are suggestive of suicide risk.

Patients in this study were selected specifically as "nonpsychiatric" patients, and therefore, except for their veteran status, were comparable to other patients in general hospitals. The review deals with suicides committed in the period December, 1948 to December, 1953. No attempt is made to draw statistically valid conclusions from this small sample, and only general trends or clinical impressions are discussed.

In this series, all of the patients were male veterans with a wide range of age (from 26 to 65 years), different racial extractions (nine Caucasian, two Negro), religious affiliations (six Protestants, three Catholics, one with "no religion" and one with religion unknown), marital status (six married, three divorced and two single) and occupational status (five unemployed, two retired, two aircraft workers and two students). Many of the social factors observed in other studies of suicide were present in the 11 cases at this hospital. The typical patient was a socially dislocated, unemployed or pensioned, physically ill, elderly male veteran who committed suicide at the beginning or end of the week (about 50 per cent on Mondays) during the night nurse shift (approximately two-thirds between 11 p.m. and 6 a.m.) by jumping from a hospital window.

In a review of the charts it was observed that in many cases a note was made immediately following admission to the effect that the patient's emotional and mental status was but minimally disturbed, and there were no notations of psychiatric aberrations which openly suggested suicidal hazard. But very often on admission there were suggestive signs of psychiatric disturbance which were noted in the record but not interpreted as such. None of the 11 patients (with the exception of one who came in with a diagnosis of suspected acute barbiturate intoxication) had a diagnosis of psychiatric disease on admission, and none had a diagnosis of psychosis at any time during the period in hospital.

Four of the 11 patients had chronic respiratory disease and three had arteriosclerosis. Eight of the patients were responding favorably to medical treatment at the time they killed themselves. Three were steadily deteriorating; they were not psychotic but showed increasing agitation and some depression related to the progress of illness, and they had an extremely strong emotional reaction to pain and disability. Only one patient would have been considered so critically ill that he would have died shortly of disease.

Ten of the patients jumped from a hospital window or from an open ramp to the ground four or five floors below. The other cut his throat.

Four of the five patients who killed themselves within five days after admittance appeared psychotic. Two of the three patients who were in hospital for ten days or more before suicide showed

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From the University of Southern California School of Medicine, Los Angeles.

Submitted June 20, 1958.

gradual development of psychosis. Three killed themselves on the second or third day in the hospital. The two youngest patients, who were Negroes, killed themselves soonest.

From the psychiatric data available it was noted that although nine of the eleven patients had a history of significant neuropsychiatric disorder, in only one patient was this history significant with respect to suicide risk. Of greater importance was the conclusion drawn from a review of the data, that suicide hazard in patients of the kind in this series could be evaluated solely from clinical observation. Upon retrospective analysis of the clinical data it was noted that eight of the eleven patients who killed themselves had unrecognized psychosis, seven with organic psychotic reactions and one with an involutional psychotic reaction. Of the seven with organic psychosis, four had organic confusion states with psychotic depressive reactions associated with chronic brain damage syndromes, and three showed toxic psychotic reactions associated with acute and chronic alcoholism.

The three remaining patients, all over 60 years of age, showed obvious signs of emotional disturbance related to their physical disease and distressing physical symptoms, but no clinical signs of psychosis could be inferred. Only one patient, however, showed serious enough physical disease with severe pain and disability to make suicide appear primarily related to the pain. In the case of the three nonpsychotic patients, the act of suicide appeared to have been done on impulse for delivery from intolerable tension related to the severe emotional reactions to their disabilities. In all three, continuous dyspnea, unrelieved by treatment, appeared responsible for stretching the tension to an intolerable degree. Factors in three areas were observed in these cases: (1) "Hysterical" personality make-up, (2) history of chronic progressive disease with signs of increasing respiratory difficulty not responding to treatment, (3) advanced age.

Obvious psychiatric signs of severe emotional disturbance appeared at least 24 hours before suicide in ten of the eleven patients; seven of the ten were psychotic during this time. These patients showed clinical signs of mental deterioration, hallucinations and delusions, intense guilt feelings about alleged early sex activities, decided preoccupation with physical symptoms and physical disability, pronounced feelings of self-depreciation, ideas of unworthiness, paranoid ideas or continuous excessive demands for help and treatment. One patient, in whom there were no significant psychiatric signs at least 24 hours beforehand, did show sudden unprovoked anger and peculiar behavior immediately before suicide.

It is assumed that all but one of the patients developed strong suicidal impulses in the hospital while under observation and treatment. The acts of suicide appeared to be largely impulsive in nature, related to the organic confusion states. Since acute behavioral disturbances associated with acute and chronic brain damage syndromes are transient in most cases, and some of them reversible, high suicide risk in these states could be reduced by adequate temporary precautionary measures that almost any general hospital could carry out.

Although no psychiatric signs which could be cited as specifically significant of suicide hazard were observed in the present study, the relationship between suicide risk and psychosis was apparent. The high suicide risk for psychotic persons, previously stressed in the literature, may prove to be even higher for psychotic persons who have severe physical illnesses requiring hospital care or for physically ill patients who develop psychotic reactions during the course of their illness and hospitalization.

A most arresting observation in this study was the general unawareness, on the part of the attending physicians, of the clinical signs of toxic delirious states, and more especially an unawareness of the transient character of these clinical signs and of the rapidity of fluctuation in consciousness and sensorium. In only one case in the series was psychiatric consultation requested, and the patient killed himself before it could be carried out.

Problems in the evaluation of psychosis and suicide hazard probably resulted from a number of factors: (1) Patients in a general hospital were not considered psychotic unless constantly and grossly disturbed in their behavior; (2) there appeared to be an unfamiliarity with the clinical manifestations of organic confusion states; (3) the suicide hazard had not been closely identified with organic psychosis by nonpsychiatric physicians who had a low index of suspicion of suicide in general hospital patients; and (4) psychiatric orientation among nonpsychiatric physicians generally appeared to be low. Hence it might be well for nonpsychiatric physicians to consider all patients having organic confusion states and toxic psychoses as suicide risks and take at least the minimal precautions.

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Admittance of Mental Patients

A Ten-Year Study of Certification by Health Officer in Orange County

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• Seventeen states provide for admission of patients to mental hospitals by medical certification without judicial procedure. The aim is to avoid the police aspects of dealing with mentally ill persons without depriving them of constitutional rights. The California law, passed in 1947, has now had ten years' trial. In Orange County, 888 patients were examined under this act between 1947 and 1957. Of these, 486 were admitted to state mental institutions while 402 did not currently require hospitalization. Local modifications have provided additional safeguards to the patient, have made it more acceptable professionally, and have resulted in wider use of the act in Orange County.

A comparison of costs between the medical certification procedure and court commitments indicated that, in 1957, court commitments were seven times more expensive than admissions by medical certification.

The greater humanity of the procedure and the economy of it lead to the conclusion that, with a few changes, medical certification of mentally ill patients should be more widely used.

EVER SINCE Pinel[2] ordered the chains to be removed from the hands and feet of the insane at the Bicetre in Paris in 1792, there has been a ferment to develop an admission procedure that would minimize its police aspects without abridging the patient's constitutional rights. This aim, shared by all prominent authorities in the field, grew out of the realization that a large majority of mentally ill patients are just "sick people" who require no coercion at all and need only to be admitted to the proper medical facility. On the other hand, the illogical mental processes of the mentally ill patient necessitate that legal restraint be possible, if it is needed.

The latest information obtainable indicates that in 1955, 17 states* provided for admission of patients to mental hospitals by medical certification without judicial procedure.[1] In some states the authorization is only for admission as voluntary patients; in others it carries with it the authority to hold or detain. Seven states (Arkansas, California, Florida, Idaho, Missouri, New York and Utah) provide that application for admission may be made by a local health officer.

In California, the Statutes of 1947 added Article 3.5, Sections 6610-12 (Admission on Certification) to the Welfare and Institutions Code.[3] This article provides an additional, but not exclusive, procedure for the admission of mentally ill persons to state hospitals. This section states:

"Nothing in this article shall be construed as repealing any other provision of law providing for the admission of mentally ill persons to state hospitals, or providing for the commitment of mentally ill persons to state hospitals."

In this act, the certification of admission provides that an application may be initiated by a health officer by which a mentally ill patient is certified for admission to a state mental hospital. The health officer's certification must be based on an examination of the patient made by two qualified physicians other than the health officer. Since the effective date of the act, September, 1947, the Orange County Health Department has used the procedure with increased frequency through the years. In 1948 Orange County was the third largest user of the act and since 1954 has used the health officer application more than any other county except Los Angeles.

The health department's procedure for certifying patients under the Health Officer Application Act is as follows:

1. The informant, who may be the patient, a relative or physician, refers the case to the health officer. After a preliminary conference with the patient's physician, by either a health department physician or by the social service consultant, a decision is reached as to whether the patient's problem calls for a psychiatric evaluation or may be solved by other community resources. Among other things, the patient's willingness to accept diagnosis and treatment is determined.

2. When possible, a family, social and economic history is obtained and summarized for the use of the psychiatrist. Families that are able to pay the physicians for their services are expected to do so. For examining those who are unable to pay, the psychiatrist is paid by the health department.

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*Arkansas, California, Delaware, Florida, Idaho, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, New Hampshire, New York, Pennsylvania, Rhode Island, South Carolina, Utah, Vermont.

3. The psychiatrist sees the patient and evaluates his problem, concluding that the patient needs either hospitalization or out-patient therapeutic services or counsel of other types. If hospitalization is recommended, the psychiatrist completes the necessary forms. As required in the act, another physician, usually the family doctor, acts as the second examining physician. Upon completion of all forms, the patient is ready for admission to a state hospital.

4. As a rule, the family or friends assume the responsibility for transporting the patient to the hospital. When no transportation is available, the health department provides this service.

MENTAL HEALTH RESOURCES IN ORANGE COUNTY

In an area such as Orange County, which has an average influx of about 30 families a day, community resources may be overwhelmed. Fortunately, the influx of psychiatrists, psychologists and social workers in the last two years has partially supplied the personnel needs of mental health.

The mental health resources in Orange County include 11 doctors of medicine and one osteopathic physician who specialize in psychiatry. In addition, there are two professional casework agencies with a staff of trained social workers, and there are 15 trained social workers employed in other private and public agencies in the county. There are seven qualified psychologists, with doctor of philosophy degrees, in private practice, and the public schools employ about 30 psychologists doing diagnostic evaluations and consultations. The only other mental health resource in Orange County is the detention ward of the Orange County General Hospital. The ward was built in 1920 and has a 26-bed capacity. In 1956, the people voted bonds for a new 97-bed psychiatric unit which is now under construction.

ROLE OF SOCIAL SERVICE

In the administration of the Health Officer Application Act in Orange County, the division of social service of the health department assumes the following responsibilities:

1. Screening new referrals by preliminary interviews, either in person or by telephone.

2. Obtaining pertinent social, psychiatric and medical history for the use of the psychiatrist in making his diagnosis and recommendation.

3. Explaining to the family and the patient the uses of this procedure and, if indicated, preparing the patient for psychiatric evaluation and possible hospitalization.

4. Giving short-term supportive help to the family in meeting the crisis of the patient's illness.

5. Maintaining the mental health records in the health department.

6. Making statistical studies.

MODIFICATION IN USE OF HEALTH OFFICER APPLICATION

Sections 6610-12 of the Welfare and Institutions Code require that two physicians examine the patient to determine the need for hospitalization. Since the health officer usually does not see the patient in person, in Orange County a safeguard for the patient is added in that one of the physicians is required to be a psychiatrist.

Another noteworthy modification in Orange County is that when the psychiatrist is paid by the health department, he is paid an hourly rate for his services rather than the nominal fee specified in the act. The fee paid is not the regular private practice rate, but to be certain that it is a more adequate compensation, the psychiatrist is paid for time used in preparing the report. In addition, if he calls on the patient at home or in the hospital, he is paid the hourly rate while in transit. The rate used is the same as that paid to other clinicians when they work in child health conferences and similar programs. When the patient or his family is able to pay the physician, no charge is made to the health department.

DESCRIPTION OF PATIENTS EXAMINED

During the 1947-1957 period, 888 patients were examined under the Health Officer Application Act. Four hundred and two were examined but found not to need hospitalization. Four hundred and eighty-six were examined and found to need hospitalization and were admitted to a state mental hospital. Some patients received more than one examination but are included only once in the totals. Ten of the 486 patients admitted had had a previous examination, at which time they were thought not to need hospitalization.

Of the 402 persons who were examined but not admitted, 68 (16.9 per cent) had had psychiatric hospitalization previously and 278 (69.2 per cent) had not. In 56 patients (13.9 per cent) this information was not available.

Of 486 patients who were admitted under the Health Officer Application Act, 157 (32.3 per cent) had been previously hospitalized for psychiatric disorders and 289 (59.5 per cent) had not. In 40 cases (8.2 per cent) this information was not available.

A communication from the State Department of Mental Hygiene for the fiscal year ending June 30, 1956,[4] indicated that Los Angeles County used the Health Officer Application Act for the admission of 118 patients to state hospitals. This was 30 per cent of the total admissions under this act for the year 1956. Orange County was second with 46 admissions or 12 per cent of the state total. San Mateo with 25 and Merced with 24 were next with 6 per cent each. Alameda County was fifth with 20 patients or 5 per cent of the total. Twenty-nine of the remaining counties admitted 162 or 41 per cent of the patients. Twenty-four counties did not use the Health Officer Application Act in the fiscal year 1955-56.

FINANCIAL ASPECTS

In 1957, Orange County utilized the health officer application for 168 patients. The health department assumed financial responsibility for 130 patients at a cost of $3,948.35, an average of $30.37 per patient. This included the cost of a psychiatric examination, clerical and administrative cost and transportation for an occasional patient. For 38 patients, the family assumed all costs.

By comparison, in 1957, 392 petitions were filed for mental patients through the Orange County district attorney's office. As required by law, these patients were confined in the mental health service of the Orange County General Hospital for an observation period averaging six days. An estimate of cost was made by the county hospital, the sheriff's office, the district attorney's office and the judicial party which included judge, bailiff, court clerk and court reporter. The total cost to the county for these 392 patients was $84,270 or $215 per patient.

The attending psychiatrist at the mental health service of Orange County General Hospital estimated that 10 per cent of the 392 patients who were processed through the mental health service in 1957 could have been processed by health officer application. If they had been, the savings in cost to the county would have been about $7,500.

OPINIONS OF PSYCHIATRISTS USING HEALTH OFFICER APPLICATION

Eight of the 12 psychiatrists who have utilized the health officer application in Orange County were asked their opinion of the advantages and disadvantages of the procedure. The following is a summary of their opinions:

A. Advantages

1. The health officer application is an expedient means of hospitalization in emergency cases and enables earlier beginning of treatment, with less need for long stays in the hospital.
2. Since treatment is started earlier, prolonged institutionalization is often avoided.
3. This is an inexpensive means of getting a patient into the hospital.
4. The trauma of the illness is not aggravated by a week-long detention and subsequent court procedure.
5. In most cases, the patient accepts the physicians' recommendations for hospitalization, thereby assuming a participating share in his treatment.
6. It is a less traumatic experience for both the patient and his family.
7. The physician-patient relationship reduces the patient's resistance to treatment as compared to the judicial procedure ordering commitment.
8. The health officer application is a means by which ancillary services may better serve emotionally disturbed persons and their families. Social casework and other services rendered to the patients who are not admitted may serve to keep some of them out of the hospital altogether.

B. Disadvantages

1. The forms for reporting and recording are complicated and should be simplified. This may necessitate redesigning the forms.
2. The compensation to physicians provided by law ($10 per patient) is inadequate and is not commensurate with the time and skills required.
3. Formerly, progress notes and notices of discharge were sent to the health department. More recently, however, patients admitted under health officer application are discharged outright, without the psychiatrist or the health department being informed of the discharge, the prognosis or the recommendations for follow-up. Naturally, this results in the patient's attempting his readjustment in society without adequate skilled support.

In general, the physicians who have utilized the health officer application in Orange County feel that it is an excellent tool and should be more widely used throughout the state.

CONCLUSIONS

The health officer application method of admitting patients to psychiatric hospitals:

1. Treats the patient's mental problem as a medical illness rather than as an offense against society.
2. Provides adequate safeguards to protect the patients' constitutional rights.
3. Encourages the patient to participate in his own treatment plan and often results in a shorter period of hospitalization.
4. Helps to maintain the traditional physician-patient relationship.
5. Entails less emotional trauma to the patient and his family.
6. Provides a prompt means of admitting patients to state mental hospitals in emergency.

7. Is an economical method of admitting patients to mental hospitals. (In Orange County the saving averaged $184.63 per patient.)

RECOMMENDATIONS

On the basis of ten years' experience with the Health Officer Application Act in Orange County, the following recommendations are in order:

1. A study should be made of the forms used for reporting and recording (DMH 20, 21 and 22) to provide greater simplicity and convenience.
2. All patients apparently in need of admission to a state hospital should be considered for health officer application before they resort to filing a petition for commitment in the district attorney's office.
3. The procedure of sending discharge notices and recommendations to the local health department and the patient's physician should be resumed.
4. Since patients who are admitted under the health officer application are usually in the hospital for a relatively short period (90 days or less), it is apparent that patients should be paroled rather than be discharged outright.

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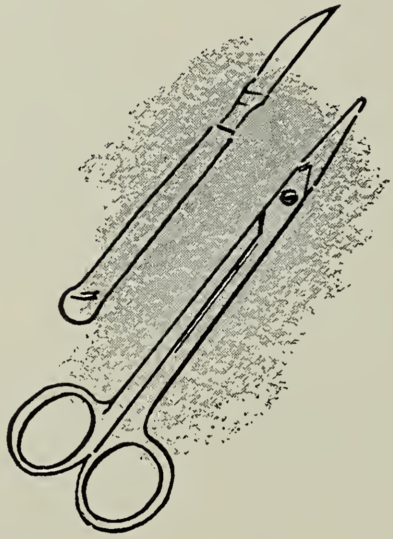

Ultrasonic Therapy

Physiological Basis and Clinical Application

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• Ultrasound is a relatively new but fairly well accepted physical modality. Therapeutically, ultrasonic energy is employed empirically, but the present trend is to utilize low and medium intensities, 0.5 to 2.0 watts per square centimeter, rather than high intensities, over 2.0 watts per square centimeter, for medical purposes.

The important physiological effects of ultrasonic energy on living tissue are thermal, mechanical, chemical and biological. Which one of these effects is dominant is not clearly understood. However, the intensity of the ultrasound field and the duration of application determines the extent to which the thermal or the mechanical effect prevails.

From a clinical point of view ultrasonic energy has been most effective in the treatment of painful conditions involving the musculoskeletal and neuromuscular structures. More recently, studies have been directed toward the use of ultrasound as a neurosurgical tool.

ALTHOUGH STILL CONTROVERSIAL, after two decades of voluminous and sometimes confused discussion and reports in the medical literature, ultrasound is today a generally pretty well accepted physical modality and is employed therapeutically in institutions, in private offices of medical practitioners, and by various technicians, some of whom (but unfortunately not all) are supervised by the medical profession.

Therapeutically, ultrasonic energy is employed empirically. Absolute standards have not been established, although categories of low, medium and high intensity levels have been defined. The tendency at the moment is for a majority of practitioners who use ultrasound to utilize low and medium intensities for medical purposes. Low intensity ultrasound is generally considered to be in the intensity range of 0.5 to 1.0 watt per square centimeter of transducer (sound head) surface. Medium range intensity is generally betwen 1.0 and 2.0 watts per square centimeter. Intensities exceeding 2.0 watts per square centimeter are rarely used for medical purposes and are not generally recommended by most investigators in this field except for destructive purposes. An axiom in treatment with ultrasound is: "Never produce pain" (in the area being treated). If this precaution is observed, deleterious effect is unlikely.

From a physiologic point of view, the Arnd-Schulze law applies to ultrasound therapy. In essence this law states that low dosage or weak stimuli promote physiological activity, moderate stimuli sustain such activity, strong stimuli retard the activity, and excessive stimuli arrest or destroy it.

One of the major areas of disagreement today regarding the specific mode of action of ultrasound revolves around the question: How does ultrasound act? Several schools of clinical and investigative thought have arisen around this problem. One group contends that ultrasound acts only through a concentrated and localized form of deep heat,[4,15,18,27] while another believes that the action is primarily mechanical.* It is very likely, however, that the modus operandi is probably a combination of both.

From a clinical point of view the exact or specific mode of action is relatively unimportant; the method of application, the intensity and the indications are of prime importance.

PHYSIOLOGIC ASPECTS OF ULTRASOUND

The important effects of ultrasonic energy on living tissue are generally considered to be thermal, mechanical, chemical and biological. The degree of tissue heating depends upon several factors—namely, the intensity of the beam, the method of application (whether stationary or stroking) and the density of the tissue being treated. It is known that muscle will absorb more energy than fat, and bone more energy than muscle. The heating effect is increased by changes occurring at the interfaces between tissues of varying densities. Despite the relatively low heating effect produced with generally accepted clinical dosages and methods of treatment, there are many investigators who favor the concept, already stated, that the therapeutic effectiveness of ultrasound is due to thermal factors alone. It should be emphasized, however, that the proponents of this idea have, in most instances, utilized intensities of

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*References 6, 12, 13, 22, 23, 30.

ultrasound in excess of those used and recommended for clinical treatment.

The mechanical effects of ultrasound energy on living tissue are acknowledged to be those of cavitation and compression[28] with high intensity, and agitation and dispersion[16] with moderate and low intensity vibrations. Agitation of the molecules in living systems has been referred to as the micromassaging effect.[17] In this connection one should mention the observations of Bierman[7] that ultrasound applied to connective tissue produces a separation of the collagen fibrils which can be seen microscopically.

The chemical effects of ultrasound have been summarized in many papers.[6,10,11,16] It has been reported that there is an acceleration of enzyme activity, an increase in membrane permeability, and an elevation of cell respiration and oxidation. Chromosomal and nuclear aberrations as well as stimulation of growth and earlier maturation have been described as occurring in plants exposed to ultrasound.[20]

Of great importance from a clinical viewpoint is the nature of the biological effects of ultrasound. One of the most misunderstood and misquoted aspects of this form of energy relates to the earlier reports of the destructive force of ultrasound upon lower vertebrates,[29] and the more recent reports of the destruction of bone and nerve tissue by ultrasound.[4,8] That these phenomena occur cannot be denied, but not to my knowledge have they occurred with clinically recommended dosage, duration and proper application of ultrasound therapy. In fact, in a report on a study of the application of ultrasound to experimentally-induced neuromas in dogs,[23] it was emphasized that there was no evidence of coagulation necrosis, cellular infiltration, cavitation or any other form of destructive process. In clinically therapeutic intensities and frequencies as utilized by experienced and careful clinicians, harmful biological effects are entirely unknown.

Among the interesting physiologic changes produced by ultrasound are those reported by Zach[31] concerning the effect on the autonomic nervous system toward an increased parasympathetic regulation leading to general fatigue, drowsiness and especially muscle relaxation. Another report in point was one by Alyea and co-workers[3] indicating that low intensity ultrasound elevates the vibration threshold* in man as recorded by the biothesiometer. Gersten[12] demonstrated that frog tendon can be made more extensible by ultrasound, presumably as a result of thermal denaturation of the proteins of the tendon.

Further elucidation of the specific mode of action is required to explain the other physiologic phenomena of hyperemia, analgesia, mobilization of fluids and softening of scar tissue.

CLINICAL APPLICATIONS

The majority of ultrasound generators in use in the United States for therapeutic purposes are set at a frequency of 800,000 to 1,000,000 cycles per second, and have a treatment head measuring 5 to 7 square centimeters. The maximum intensity or total output is usually 3 watts per square centimeter of treatment head. As previously stated, most clinicians employ intensities of 0.5 to 1.0 watt per square centimeter for a duration of 5 to 10 minutes. Treatment is given daily or every other day or three times a week. Smooth surfaces are treated directly, mineral oil or some other form of lubricant being used to provide an air-free contact between the skin and the treatment head. Rough or uneven surfaces are treated under water with the treatment head a distance of ½ to ¾ inch from the part to be treated. The treatment head is moved slowly over the area to be sonated in order to avoid excessive heating of the underlying tissues. The number of treatments which may be given varies with the condition of the area to be treated, the nature of the defect, and the patient's response to therapy.

Generally, a series of five to twelve treatments is employed. In my experience some degree of relief, especially of pain, should be obtained by the completion of the fifth or sixth treatment. If the patient has had no subjective relief by that time, ultrasound probably will not benefit and may be discontinued. The use of ultrasound therapy for any and all conditions is unconscionable, for in many conditions other modalities are more effective. On the other hand, ultrasound may frequently augment the use of other modalities or procedures.[24]

Ultrasound has proved most successful in the treatment of neuromuscular and musculoskeletal disease. Numerous reports are available in the literature relative to the use of this modality in osteoarthritis,[1,9,25] bursitis,[5] rheumatoid arthritis,[21] soft tissue contractures,[7] myositis,[14] fibrositis, sciatica,[2] ankylosing spondylitis, neuroma pain,[22,26] scar pain, phantom limb pain,[22,23] and the pain of herpes zoster.[21]

Whereas most clinicians prescribe or utilize ultrasound locally—that is, directly over the involved area—the use of radicular sonation has also been advocated. In this technique the nerve roots of the corresponding peripheral areas of involvement are also subjected to ultrasonic vibrations. The most commonly "sonated" areas are the cervical and lumbar roots. In this method the treatment head is moved slowly, in a stroking manner, over the cervical or lumbar erector spinae muscles. The rationale for the relief of pain afforded by treatment of the nerve roots is that it exerts a neurotropic effect through the sympathetic nervous system.[31]

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*The lowest electrically measured intensity of a vibratory stimulus perceived by an individual at the palmar tip of the finger.

Despite the continued controversy over the efficacy of ultrasound as a medical tool and the questions which are raised regarding its mode of action, it is generally accepted by physiatrists and increasing numbers of orthopedists and general physicians as a useful therapeutic modality in a limited number of conditions affecting the neuromuscular and musculoskeletal systems. The contraindications are few, if any, provided the technique and dosage are known and properly applied.

Regarding the safety of the modality it should again be emphasized that studies utilizing therapeutic dosages of ultrasound in experimentally induced neuromas in dogs demonstrated the absence of any detectable histological change in such tissue.[23] Lindstrom[19] also found that with an output of 0.5 to 2.0 watts per square centimeter applied with a stationary technique, the intensity was too low to produce histological brain lesions.

An important extension of ultrasound energy is currently under investigation—namely, its use as a surgical tool in neurosurgery. Lindstrom[19] described the use of high intensity ultrasound for destroying frontal lobe tissue in moribund patients with intractable pain from carcinoma; and more recently Meyer and Fry at Iowa State University used it for pallidectomy in patients with Parkinsonism. This phase of ultrasound is still in the experimental stage.

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CASE REPORTS

Bilateral Symmetrical Aneurysms of the Internal Carotid Arteries with Spontaneous Carotid Cavernous Fistula

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BILATERAL ANEURYSM of the subclinoid portion of the carotid arteries within the cavernous sinus is rare. Although the first recorded intracranial aneurysm in English medical literature (reported by Blane[2] in 1800) was of this type, only 15 similar lesions, proven by either postmortem examination or angiography have been reported. Reports of ten of these cases were compiled in a recent review by Seltzer and Hurteau,[9] and four additional cases were reported by Heuer and Dandy,[5] Parker,[7] Dandy,[3] and Poppen.[8] In only two cases was the presence of carotid artery-cavernous sinus fistula noted. In the case reported by Poppen it was bilateral, and in Alpers' case[1] it was unilateral following trauma to the head. In the case herein reported, both bilaterally symmetrical carotid aneurysms and a spontaneous carotid-cavernous fistula were present.

REPORT OF A CASE

A 72-year-old white woman was admitted to the Los Angeles County General Hospital June 15, 1957, with a history of blurring of vision in the left eye and occasional mild diplopia for one year. She had noted an intermittent buzzing, pounding tinnitus for a month preceding admission, and for two weeks had had mild left frontotemporal headaches. Pain in the left eye and dizziness had been present for one week. On the evening before admission to hospital, ptosis developed on the left side. The patient awoke the following morning with painless but massive edema and reddish discoloration of the lids of the left eye and left proptosis. No history of trauma was elicited and the past medical history was noncontributory.

Upon physical examination the blood pressure was observed to be 160/100 mm. of mercury, the pulse rate 76 and the temperature 98.6°F. No cranial bruit was audible. The lids of the left eye were red and edematous, and there was hemorrhagic chemosis of the conjunctiva. Moderate proptosis was also evident and total left ophthalmoplegia was present. The fundus was not visualized and there was no light perception on the left. The right eye was normal in all respects. Mild hypesthesia in the cutaneous distribution of the left ophthalmic nerve was noted. The patient was right-handed and both speech and mental function appeared normal. Except for moderate cardiomegaly, no other significant general physical or neurologic abnormalities were observed. The leukocyte content of the blood was a little above the normal range. There was a trace of albumin in the urine. The spinal fluid was clear and the pressure not elevated. The protein content was 125 mg. per 100 cc. No abnormalities were noted in an electroencephalogram or in x-ray films of the skull and sinuses.

On June 24, 1957, left carotid angiography, with a 50 per cent Hypaque solution used for contrast medium, showed a large aneurysm of the subclinoid portion of the internal carotid artery and two smaller aneurysmal dilations of the internal carotid and middle cerebral artery distal to the large aneurysm (Figure 1). Right carotid angiography was not done at this time. Immediately following angiography the patient noted a loud continuous bruit, loudest over the left orbit. It was obliterated on compression of the left carotid vessels and could be made louder by right carotid compression. A recording of this bruit made with a phonocardiogram apparatus with simultaneous electrocardiographic tracing, showed a continuous murmur with systolic intensification (Figure 2). Manual occlusion of the left common carotid for periods as long as five minutes had no adverse effect.

On June 25, 1957, with local anesthesia, the left common carotid artery was exposed and was completely and rapidly occluded in an attempt to promote closure of the carotid-cavernous fistula present on that side. Aphasia occurred quickly, whereupon the clamp was immediately opened and aphasia disappeared. The artery was then slowly occluded over a period of a half hour, during which time the patient remained coherent and showed no further signs of left cerebral ischemia.

After another 30 minutes of total occlusion without untoward effect, the artery was ligated in con-

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From the Los Angeles County General Hospital.

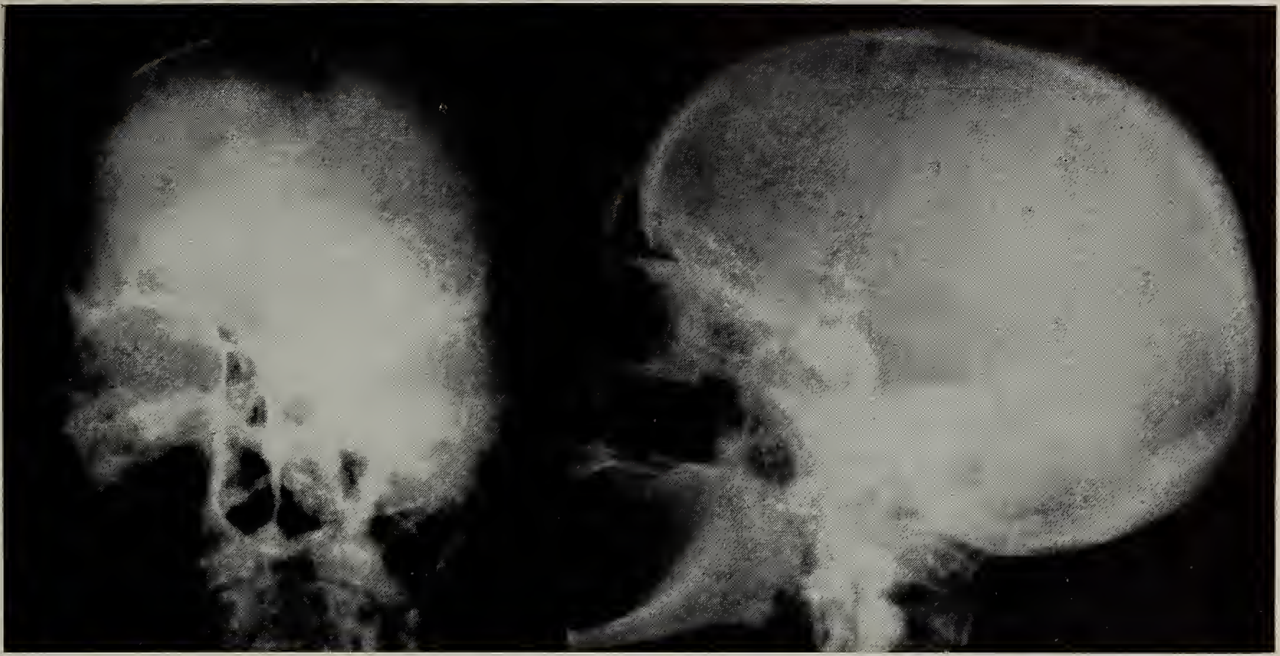

Figure 1.—Preoperative left carotid angiogram demonstrating large subclinoid and smaller supraclinoid carotid aneurysms with small middle cerebral aneurysm.

tinuity and the wound was closed about an inlying polyethylene catheter, the end of which lay adjacent to the superior cervical sympathetic ganglia. This catheter was irrigated with a solution of 1 per cent Xylocaine (lidocaine hydrochloride) at intervals throughout the first 36 hours postoperatively, after which time it became non-functional and was removed.

Following occlusion of the left common carotid artery, the blood pressure rose from a pre-operative level of 140/90 mm. of mercury to 220/110, where it remained for approximately 36 hours. It then slowly returned to normal, continued to fall and reached hypotensive levels during the third postoperative day. Concomitant with the fall in blood pressure, dysarthria and right facial paresis developed. An electrocardiogram showed no evidence of myocardial damage, and except for hypotension there were no clinical or radiographic findings to suggest the occurrence of pulmonary embolism. Despite left stellate blocks and the administration of pressor agents which raised the blood pressure to 160/190 mm., the condition of the patient deteriorated to right hemiparesis and complete aphasia on the fourth postoperative day. The operative wound was reopened on June 30 (the fifth postoperative day) and the carotid artery was noted to be collapsed and firm without pulsations distal to the point of ligature; the ligature was not released, as it was presumed there was a propagating thrombus distal to the point of occlusion. Inhalations of a mixture of oxygen and carbon dioxide (Carbogen®) did not help and pressor drugs in high concentration were required to maintain a satisfactory blood pressure. The general condition of the patient continued to deteriorate and tracheostomy and gavage were instituted. Hypotension gradually abated during the second postoperative week and the use of pressor drugs was discontinued when the blood pressure stabilized at 120/90 mm. The left proptosis and periorbital edema were both subsiding and the bruit had been absent since the ligation.

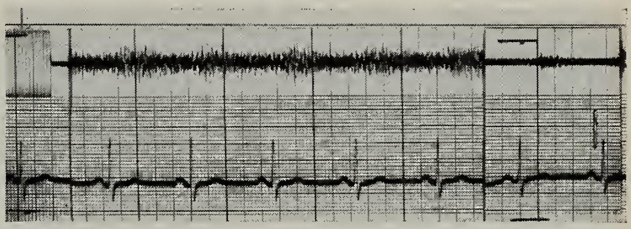

Figure 2.—Recording of bruit from left frontotemporal region.

During the ensuing six weeks global aphasia, paralysis of the right arm and face and weakness of the right leg continued, but the left proptosis continued to recede. By August 16, the patient was beginning to show activity and interest in her surroundings. In the next six weeks she regained speech and some function of the right leg, although decided paralysis of the right arm and face remained. No abnormalities were noted in an electroencephalogram at this time.

On September 24, 1957, carotid angiograms were taken, first on the right (Figure 3) and then on the left (Figure 4) when it was noted that both sides of the cerebral tree did not fill from the right. On the right side there was a large subclinoid aneurysm at a point corresponding to that of the one previously demonstrated on the left. A smaller saccular aneurysm of the carotid just distal to the large aneurysm was also demonstrated. The left carotid vessels could be palpated and a left carotid angiogram was done, the medium being injected distal

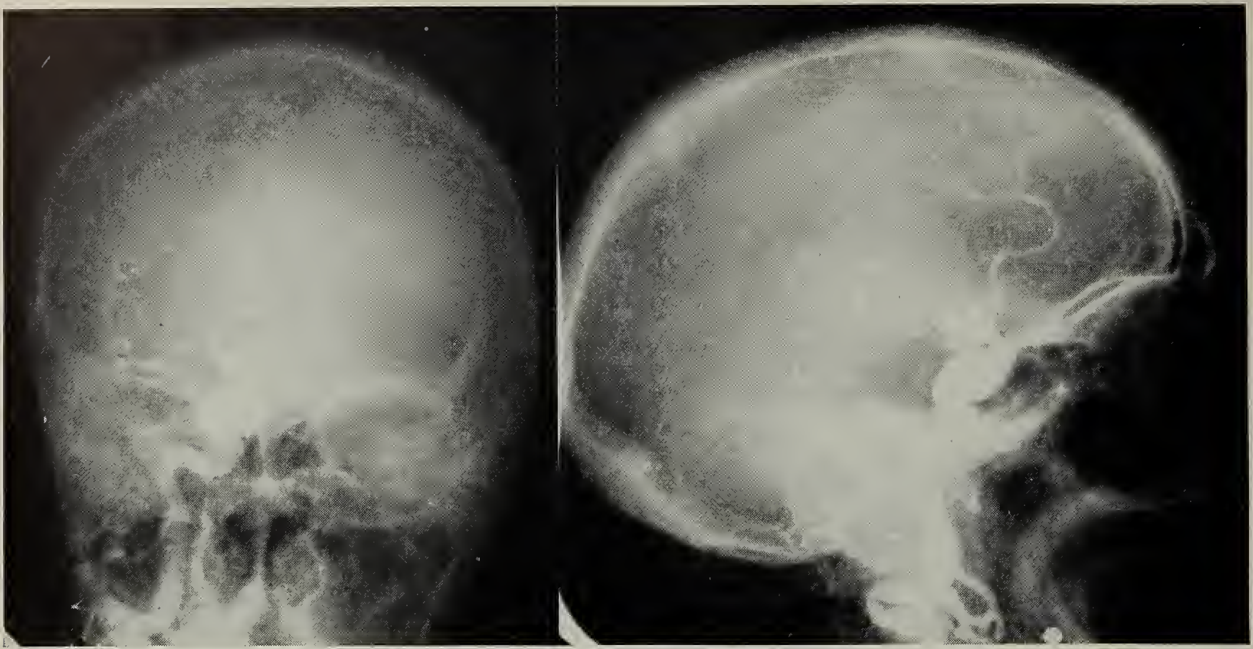

Figure 3.—Postoperative right carotid angiogram demonstrating large subclinoid and smaller supraclinoid carotid aneurysms.

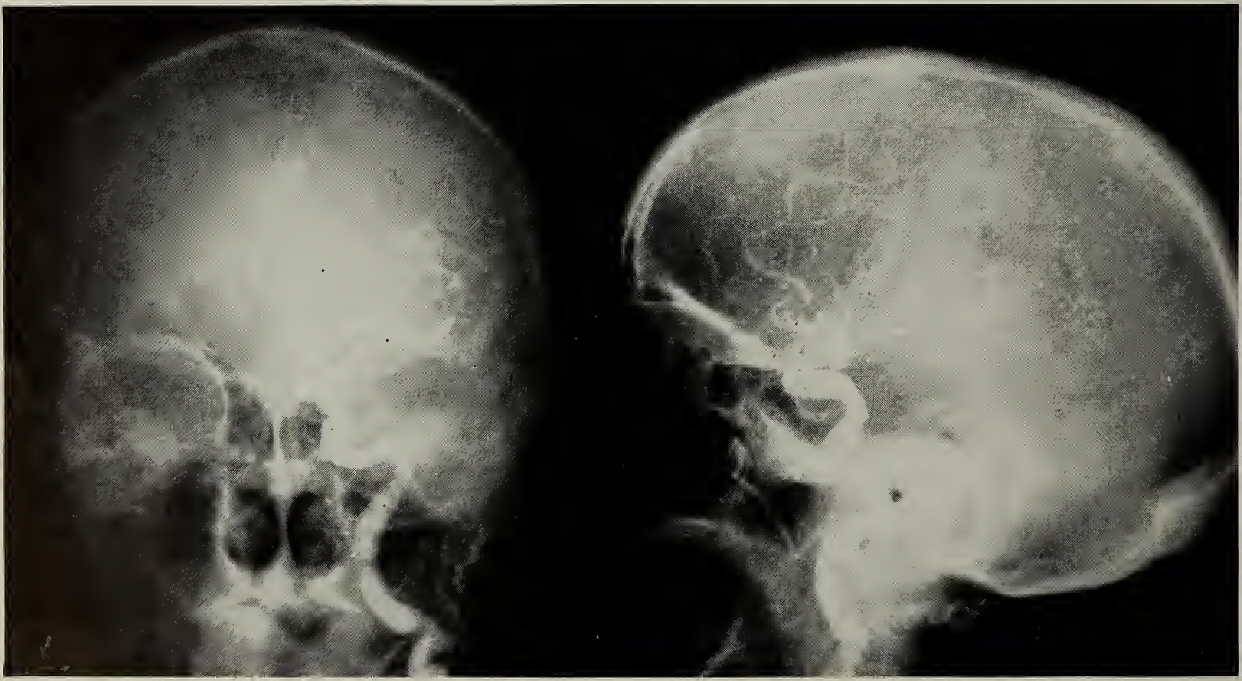

Figure 4.—Postoperative left carotid angiogram demonstrating decrease in size of subclinoid aneurysm and disappearance of middle cerebral aneurysm.

to the ligature. Good filling of the left internal carotid artery and notable diminution in the size of the subclinoid aneurysm were observed. The aneurysm that had been visualized on the proximal middle cerebral artery was no longer seen. The distal ramifications of the left middle cerebral group filled well and no evidence of thrombosis of this group was seen.

When last examined, four months after operation, the patient was able to walk short distances with support and showed only mild residual disturbance of speech. The right arm remained paralyzed and the right leg weak. The left eye was blind, the globe shrunken and the muscles paralyzed. The bruit had not recurred and the right carotid aneurysms remained asymptomatic.

DISCUSSION

Among the interesting features of the present case were the multiple symmetrically placed aneurysms of both carotid arteries that caused no severe distress until rupture of one into the left cavernous sinus brought about impairment of all the nerves supplying the left eye and severe overfilling of the left orbital venous system. The mechanism and sequence of involvement of the third through sixth cranial nerves in their course through the sinus by intracavernous aneurysms was described by Jefferson,[6] who emphasized that the oculomotor nerve is involved early by compression from the aneurysmal mass, and that anesthesia in the distribution of the trigeminal nerve accompanying ocular muscle palsy is a diagnostic combination most suggestive of a subclinoid aneurysm.

The complications following left carotid ligation in the present case were also of interest. In this patient, the collateral circulation to the left cerebral hemisphere was adequate as long as the blood pressure remained elevated; but when hypotension supervened, the combined action of pressor drugs and cerebral vasodilating agents was insufficient to provide adequate blood flow to the left hemisphere and symptoms of cerebral ischemia developed.

The arterial hypertension immediately following carotid ligation was probably a manifestation of carotid sinus pressor reflex activity, and presumably provided sufficient inflow from collateral channels to prevent left cerebral ischemia. The subsequent occurrence of arterial hypotension was accompanied by progressive and severe neurologic deterioration, which has been reported in other cases in which arterial hypotension occurred after carotid ligation.[4] It is most likely that the cause is a diminution in collateral inflow secondary to lowered arterial pressure, but what causes the hypotension is obscure.

Another possible factor in reduction of collateral inflow is vascular spasm, both general and local, the latter specifically in relation to the presence of aneurysms on the right carotid which could induce local arteriospasm as well as the potential distortion of normal flow by the physical mass of the aneurysm. Collapse of the internal carotid artery, noted on the third postoperative day, was apparently due in part to spasm of the collateral vessels rather than to thrombosis, particularly since angiographic visualization later showed patency of the left carotid vessels distal to the ligature.

Cerebral edema resulting from prolonged cerebral ischemia probably developed during the fourth postoperative day, leading to stupor and further progression of neurologic deficits, and causing even further diminution in the left cerebral inflow. The improvement noted in the second postoperative week was probably due to remission of cerebral edema, and the later continued improvement was probably owing to development of improved collateral channels to the left hemisphere.

SUMMARY

A case of bilateral symmetrical aneurysms of the subclinoid and supraclinoid portions of the internal carotid arteries is presented. The case was of particular interest because of the development of a spontaneous carotid-cavernous fistula on one side and the developments that followed ipsilateral common carotid ligation.

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Cavitary Carcinoma of the Lung

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In 3 TO 4 PER CENT of all cases, carcinoma of the lung is visualized roentgenographically as a cavitary lesion. Operative therapy is frequently delayed unduly while an attempt is made to determine the cause of the lesions noted. Generally, the diagnostic procedures include microscopic examination of sputum, preparation of cultures and guinea pig inoculation as well as skin tests for coccidioidomycosis and histoplasmosis. We believe that thoracotomy should be carried out if necessary to resolve the diagnosis rather than permit undue delay entailed in more conservative methods. Strang[3] in a review of 1,930 cases of carcinoma of the lung noted that 3.6 per cent of them were seen in roentgen studies as

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Submitted July 2, 1958.

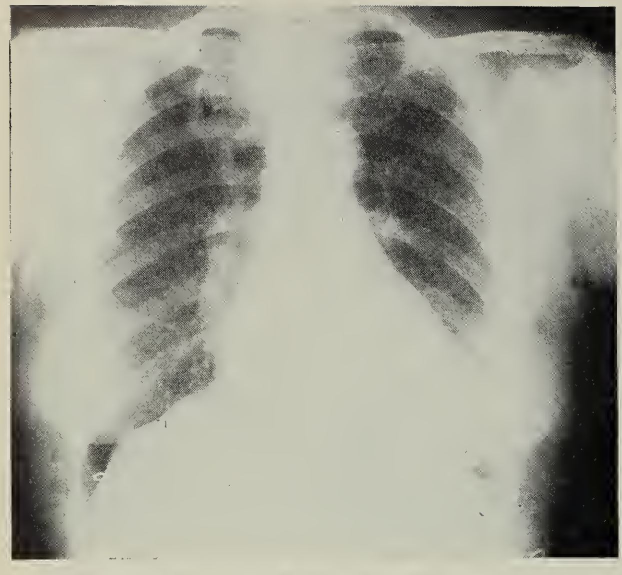

Figure 1 (Case 1).—Right apical cavitary lesion in February of 1954.

cavitary lesions. Brock[1] noted that bronchogenic carcinoma was the cause in 56 (13.8 per cent) of 405 cases of abscess of the lung. We report the following cases as illustrative of the problem.

CASE 1. A 57-year-old white woman was admitted to hospital in January of 1954 because of acute myocardial infarction. She was known to have had hypertension for the previous 12 years and had had a cerebral vascular accident in 1950 and myocardial infarction in 1951. She had been repeatedly admitted to the hospital because of acute episodes of angina, vomiting and dizziness. On previous admissions, results of laboratory studies were within normal limits, with hemoglobin content 14.5 gm. per 100 cc. of blood and the packed cell volume 46 per cent. At the present admission the hemoglobin was 10.6 gm. per 100 cc. and the packed cell volume 40 per cent. One sibling had died of tuberculosis.

Because of a persistent low-grade fever, x-ray films of the chest were taken repeatedly during the second week of hospitalization, and a cavity 2 cm. in diameter (Figure 1) was shown in the right apex. Repeated sputum examinations, guinea pig inoculations and studies of gastric aspirates were negative for tubercle bacilli. Results of skin tests with tuberculin, first and second strength, were negative. Bronchoscopic examination and thoracotomy were deemed hazardous because of the cardiac condition. It was felt that there was justification for antituberculosis therapy. The patient was discharged with instruction to report to the chest clinic for periodic examination. Radiographs taken in June and July of 1954 (Figure 2) showed enlargement of the cavity and formation of fluid. In July of 1954 the patient had another cerebral vascular accident and after a week in hospital was discharged. However, she was readmitted in coma seven days later and died in 24 hours.

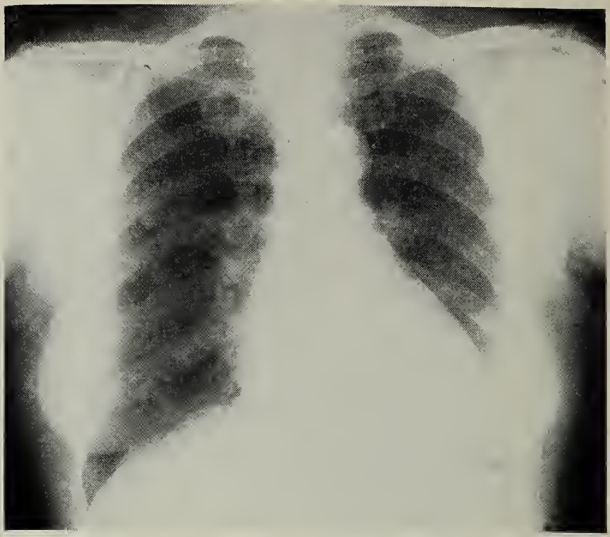

Figure 2 (Case 1).—Increase in size and extent of the cavity in June of 1954.

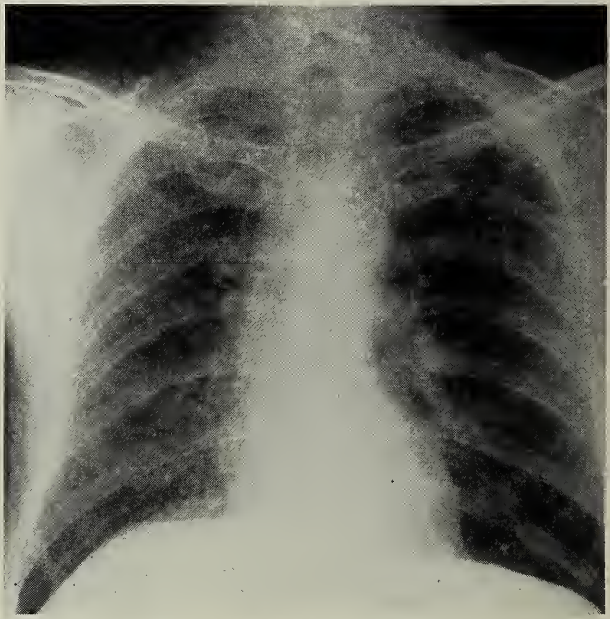

Figure 3 (Case 2).—Well demarcated cavity at the right apex.

At postmortem examination the cavity was observed to be due to a squamous cell bronchogenic carcinoma. There was cavitary degeneration within the tumor mass.

CASE 2. A 54-year-old white man was admitted March 6, 1956, for evaluation of a frozen shoulder joint. Routine minifilm examination had shown a right apical pulmonary lesion. In a full 14x17 film of the chest it was seen as a cavitary lesion of the right upper lobe (Figure 3). Microscopic examination of sputum, a serologic test for coccidioidomycosis, bronchoscopic examination, Papanicolaou cytologic studies and biopsy of a right supraclavicular lymph node all were negative for disease. Thoracotomy was done April 8, 1956. A frozen section showed carcinoma and right upper lobectomy was carried out.

The pathologist reported that the operative specimen contained infiltrating peripheral squamous cell carcinoma showing central necrosis with cavitation.

CASE 3. An 80-year-old white man was admitted March 3, 1956, because of hemoptysis. A cough of several years' duration had increased in severity two months before admittance, had become constant and was productive of yellow-green sputum. The day before admittance hemoptysis of about a cup of blood occurred. Multiple cavitary lesions were observed in a film of the chest (Figure 4). The roentgen appearance was quite atypical of carcinoma and highly suggestive of tuberculosis. The hemoglobin content was 9.5 gm. per 100 cc. of blood. Leukocytes numbered 12,000 per cu. mm., 82 per cent polymorphonuclear neutrophils. Results of urinalysis were within normal limits. The patient rapidly deteriorated and died March 11 after an episode of severe dyspnea and tachypnea.

Pathologist's report: The right lung weighed 1,000 gm. A cavity 6 cm. in diameter extended across the right upper and lower lobe fissure. The wall of the cavity was composed of firm tissue which showed squamous cell carcinoma throughout, and the cavity itself was an area of central degeneration within the tumor mass. The remaining infiltrative areas of the lung showed non-specific pneumonitis.

CASE 4. A 69-year-old white man was admitted April 30, 1956, for investigation of a cavitary lesion of the right upper lobe of the lung which was observed in a routine film of the chest (Figure 5). At the time of admission the patient was completely asymptomatic. He never had had hemoptysis. He had smoked ten to fifteen cigarettes a day for approximately 50 years. The past history included admission to hospital in February of 1955 because of severe angina. A film of the chest taken at that time revealed a 1.5 cm. density in the right upper lobe of the lung. Unfortunately, no investigative procedures with regard to this lesion were carried out.

At the time of admittance the hemoglobin was 15.2 gm. per 100 cc. of blood. Erythrocytes numbered 5.7 million per cu. mm. and leukocytes 5,000 —59 per cent filamentous forms and no non-filamentous forms. The temperature in the week following admittance varied from 37° C. to 37.4° C.

On May 1 bronchoscopy was done. The right upper lobe bronchus was visualized by use of the right-angle Broyle telescope and a polypoid tumor was seen projecting into the lumen of the bronchus. Biopsy of specimens excised from the right upper lobe orifice and the carina was negative for tumor. Right supraclavicular lymph node excision was done and no neoplasm was found on microscopic examination of the specimen.

In May exploratory thoracotomy was carried out and a non-resectable infiltrating carcinoma was found. The tumor involved the superior vena cava wall.

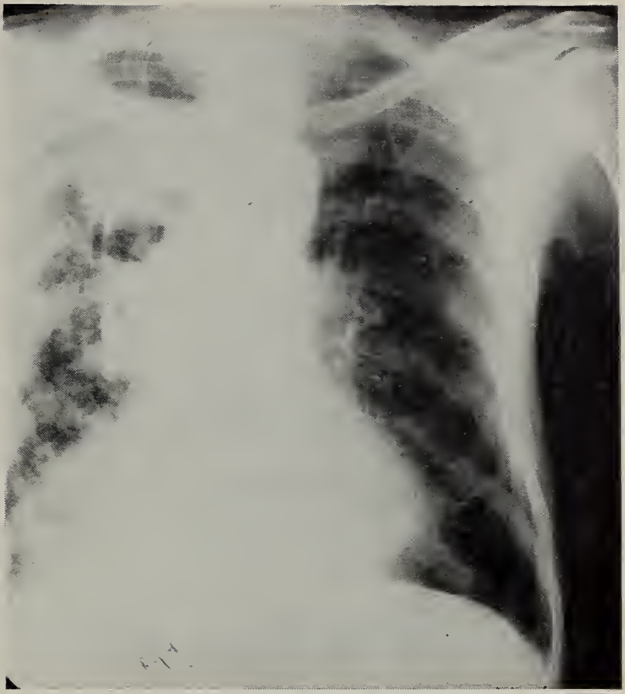

Figure 4 (Case 3).—Multiple cavitary lesions in the right upper lung field and non-specific infiltrate throughout the remainder of the lung.

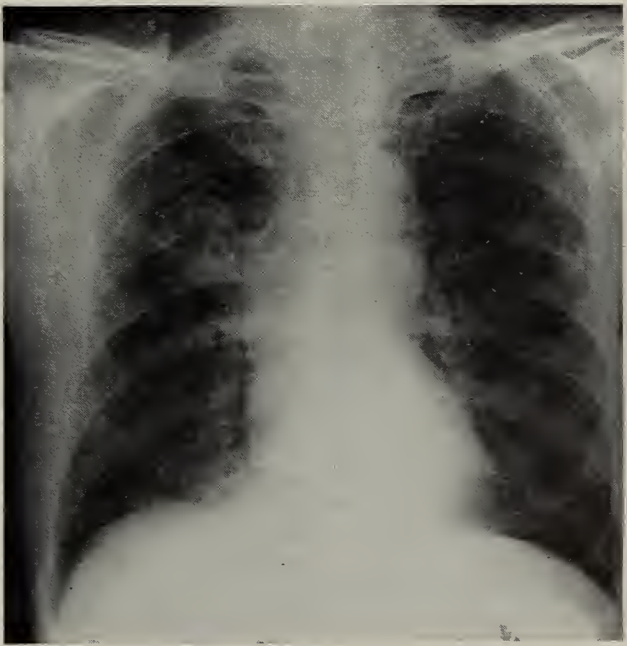

Figure 5 (Case 4).—A distinct cavity in the right upper lung field.

A diagnosis of cavitary tuberculosis was considered in this case until the observation of an endobronchial right upper lobe polypoid neoplasm at bronchoscopic examination indicated the need for early exploratory thoracotomy. The diagnosis of squamous cell carcinoma was made from tissue removed from the lateral wall of the cavity. Thus the cavity was caused by a degenerative breakdown within a tumor mass.

CASE 5. A 54-year-old white man was admitted to hospital September 13, 1956, because of malaise and loss of weight over the preceding several months. There was no associated pain or dyspnea. The patient had had a cough, occasionally productive of traces of blood but largely of creamy sputum. No abnormality was noted in a minifilm of the chest taken about a year before admittance. An x-ray film of the chest taken August 27, 1956, had shown a left upper lobe cavity (Figure 6). On September 1 no abnormality was observed in a bronchoscopic examination and there was no evidence of cancer in a supraclavicular lymph node excised at that time. The patient had smoked one package of cigarettes a day for 40 years. Broad spectrum antibiotic therapy had been begun September 1.

At the time of admittance the hemoglobin content was 16.0 gm. per 100 cc. of blood. Erythrocytes numbered 5 million per cu. mm. and leukocytes 9,500 with 47 per cent filamentous forms, 2 per cent non-filamentous forms and 41 per cent lymphocytes.

Left thoracotomy the day after admittance revealed a non-resectable squamous cell carcinoma, proven by frozen section biopsy. One wall of the tumor cavity was made up by the aortic arch.

In this case bronchoscopy and lymph node excision were done before the patient was admitted to hospital. A number of specimens of sputum were examined for acid-fast organisms before admission and in a period of two weeks before admittance, while the patient was receiving broad spectrum antibiotic therapy, repeated x-ray films of the chest showed no significant change in the infiltrate in the left upper lobe. Thoracotomy was done immediately, therefore, to establish a diagnosis and to permit whatever excisional therapy was feasible. Biopsy of material from the lateral cavitary wall indicated the cavity was an excavation of the tumor mass.

DISCUSSION

The patients in the five cases herein had cavitary lesions of the lung of indeterminate cause at the time of initial examination. The clinical course and the laboratory data are variable in such cases. There may be no symptoms or the symptoms may simulate those of acute non-specific inflammatory processes. As with indeterminate lesions of the lung of a solid nature, we feel that investigations should be carried out as rapidly as possible, including the following procedures: Examination of the sputum by smear, culture and Papanicolaou methods, bronchoscopy and biopsy where indicated, excision of the regional supraclavicular lymph nodes for microscopic examination and also for cytologic specimens and culture of the lymph nodes if specific tuberculous or granulomatous fungus lesions are suspected. In addition, we feel that the administration of a broad spectrum anti-biotic in high dosage should be undertaken as a therapeutic test even though there be no definite evidence of systemic sepsis. We feel that the investigation period may be prolonged if truly significant change is demonstrated radiologically following administration of the anti-biotic therapy, that in the absence of such a change exploratory thoracotomy should be carried out promptly. Furthermore, we do not feel that exploratory thoracotomy should be delayed to wait for the results of cultures and guinea pig inoculations. We do, however, carry out repeated early examinations of the sputum for acid-fast organisms.

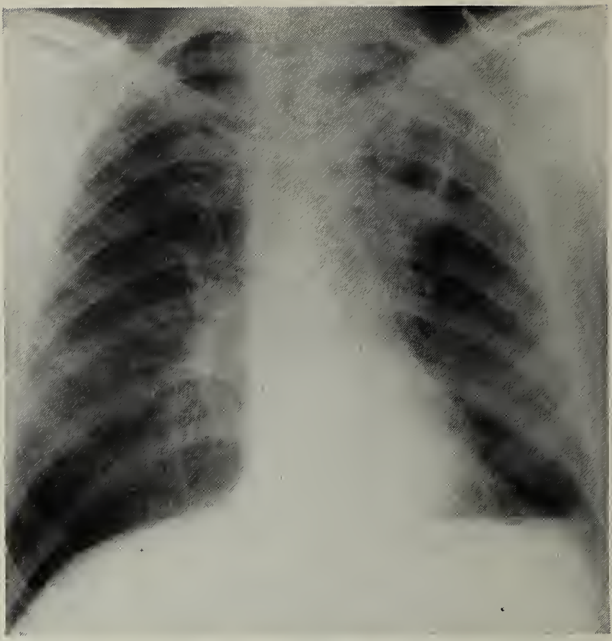

Figure 6 (Case 5).—A shaggy cavity with infiltrate around it in the left upper lung field.

All the lesions in the cases here reported were squamous cell carcinomas. Other investigators have noted that cavitary carcinomatous lesions of the lung generally are of that type. Cavitation in carcinoma of the lung may result from either central degenerative changes within tumor tissue and excavation of the central area or, less frequently, from a purely pyogenic destruction of lung secondary to the obstructive phenomena of an endobronchial neoplasm.

Unfortunately, cavitary carcinomatous lesions generally are not observed until a late stage in the disease, and prognosis is relatively poor.[3] Autopsy records in cases of death due to squamous cell bronchogenic carcinoma indicate an incidence of 12 per cent to 29 per cent of cavitation within tumor masses.[2] Other cell types cause death more rapidly, and less frequently show cavitation.[3]

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Observations on the Effect of Cortisone in a Case of Phenylpyruvic Oligophrenia

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In 1953 before diets for the control of phenylketonuria had been introduced, an intensive trial of cortisone therapy was given in a case of phenylpyruvic oligophrenia to determine whether or not this drug would eliminate the excretion of phenylpyruvic acid in the urine. Although the elimination of phenylketonuria was not accomplished, the effect of the drug on other manifestations of the disease may be of interest now since the use of a phenylalanine-free diet early has given evidence that children with this metabolic disturbance may have a chance to develop without extreme retardation.

REPORT OF A CASE

The patient, a girl born January 9, 1952, was the second child of young, healthy parents. There had been no abnormality in pregnancy, labor or birth. A sister two years older was living and well. Cousins of the patient had been put in institutions because of mental retardation (type unknown).

At two weeks of age the patient had a facial rash which later extended over the trunk and extremities. At three months of age the mother was concerned about the child's vision because of failure to watch the movement of objects. At five months it was obvious that the child was retarded in motor development and awareness. At this time also she had occasional brief jerking movements of the extremities. The rash had improved but remained over the cheeks, and there was evidence of generalized pruritus although the skin was not broken or irritated except on the face.

The child was first seen by the author and admitted to the hospital at the age of 18 months. She was blond and blue eyed and had a fair, rather doughy skin with eczematous patches over the cheeks. The head, which looked slightly microcephalic, was 50 cm. in circumference. The circumference of the chest was 44 cm. The child was 85 cm. long and weighed 27 pounds. The anterior fontanel, which was still patent, was 1.5 by 1.5 cm.

The pupils reacted to light and no abnormalities were observed on fundoscopic examination. A nasal discharge was present. The patient had 16 teeth. The heart and lungs were normal to auscultation and percussion. Unable to sit up, the patient rested in a frog-like position with general atonia of the muscles, but at times she became irritable and restless and thrashed about with purposeless movements. Apparently she did not recognize her mother either by sight or voice. The patient had random convulsive twitchings, with more severe seizures at night when she was dropping off to sleep. Hence getting to sleep was difficult, but once asleep she was not disturbed further through the night.

Results of urinalysis were within normal limits except for a positive reaction to a phenylpyruvic test. The hemoglobin content of the blood was 11.0 gm. per 100 cc. Erythrocytes numbered 4,030,000 per cu. mm. and leukocytes 12,150 with a differential of 38 per cent polymorphonuclear cells, 53 per cent lymphocytes, 3 per cent eosinophiles and 4 per cent monocytes. The sedimentation rate was 8 mm. in one hour. The number of cells in the spinal fluid and the glucose and protein content were within normal limits. Kolmer and Kahn tests were negative for syphilis. Cephalin flocculation was normal. Cholesterol content was 202 mg. per 100 cc. of serum (normal 120-260 mg.).

In a skeletal survey, bone development was observed to be six or eight months ahead of normal.

An electroencephalogram was reported as diffusely abnormal in mild to moderate degree, compatible with some generalized disturbance or delayed maturation of the brain. A pneumoencephalogram was reported as showing a moderate degree of cerebral atrophy.

A variety of drugs—diphenhydramine hydrochloride, calcium and barbiturates—were given in an attempt to allay itching and control the seizures, but no beneficial effect was noted.

The problem was discussed with an oncologist who was interested in the metabolism of phenylalanine, and he suggested a trial of cortisone alone and then in combination with ascorbic acid. The criteria to be used for evidence of the effectiveness of the drugs were: Disappearance of the excretion of phenylpyruvic acid; alteration in eczema; changes in seizures; mental or physical improvement.

Beginning November 23, 1953, at the age of 23 months and a weight of 27 pounds 10 ounces, the patient was given a five-day test with cortisone alone, as follows: First day, 50 mg.; second day, 100 mg.; third day, 75 mg.; fourth and fifth days, 50 mg. each.

On December 2 the family reported that the child had shown almost immediate improvement. She slept better and seemed more active and alert, and pruritus abated. A test showed no change in the phenylketonuria. Cortisone was continued, 25 mg. twice daily, and the patient was seen again at the end of two weeks. The reports were less enthusiastic than after the first five days. The pruritus remained under control and the patient remained more alert than she had been before cortisone therapy, but she continued to have difficulty in falling asleep at night because of seizures. The phenylpyruvic test reaction remained positive. As seizures continued after three weeks of administration of 50 mg. of cortisone daily, dilantin was given, 50 mg. three times a day, and phenobarbital, 15.0 mg. three times a day, to see whether or not this, with the cortisone, would control them.

At the age of two years and after approximately six weeks of cortisone therapy the patient was reexamined on January 7, 1954. The family of its own accord had discontinued giving dilantin and

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Submitted July 8, 1958.

phenobarbital because the seizures had not been controlled. The pruritus was under control, there was no eczema, and the patient was more alert, reached for objects and played with some of them, and made some attempts to sit up. The body weight was 28 pounds. Cortisone was continued, 50 mg. daily, and 200 mg. of ascorbic acid was added. On March 13 the status remained the same. It was then decided to try a definitive test with high doses of cortisone and ascorbic acid. As a preparation for this regimen, the ascorbic acid was omitted for three days, and then cortisone alone was given in a dosage of 150 mg. daily for one week. At the end of this period phenylpyruvic acid was still excreted in the urine. With no change in cortisone dosage, ascorbic acid, 500 mg. daily, was added. A urine test after five days of therapy with both drugs still showed phenylketonuria. A few days after the amount of cortisone was increased to 150 mg. daily, the night seizures stopped. There was complete control of eczema and pruritus, and the patient was happy, somewhat playful, able to reach for objects, recognized her parents to a degree and could sit up without support. More or less empirically and because of the reports of seizures due to pyridoxine deficiency, 10 mg. of vitamin B_6 daily, was added to the cortisone and ascorbic acid already being given. At the end of a month, phenylpyruvic acid was still being excreted in the urine. Quantitative tests were not done. Although the general improvement noted earlier continued, it seemed insufficient to warrant continuing the drugs in so high a dosage.

A period of experimentation to find the minimal adequate dose of cortisone was then started. When cortisone was reduced to 25 mg. daily, but the other two drugs maintained at previous levels, eczema returned and the patient became irritable and lost interest in her surroundings. Cortisone was therefore increased to 50 mg. daily and pyridoxine and ascorbic acid were discontinued. A normal diet with adequate content of vitamins was maintained.

Two other unsuccessful attempts to help this child were made. One was the use of reserpine, which did not relieve the restlessness. The other was a phenylalanine-free diet, which she would not eat. The patient was put into an institution in 1955.

DISCUSSION

In retrospect the general improvement of this child on cortisone may be significant. At the time of the experiment, the primary interest was in what effect there might be on the output of phenylpyruvic acid. Throughout the period of experimentation, phenylketonuria continued.

Although it is difficult to separate alterations due to growth and development in a retarded child from effects of therapy, it can be stated that the eczema and general pruritus improved and practically disappeared during therapy. (It must be noted that this is not unique in patients with phenylpyruvic oligophrenia.) The seizures ceased after the dose of cortisone was increased to 150 mg. daily but did not return during a period of observation when it was again reduced to 25 and 50 mg. Hence, an assumption that cortisone therapy per se brought about the improvement must be looked upon skeptically. Finally, the general improvement in awareness, in emotional response and in ability to sit up and reach for objects not only began soon after therapy with the drug was started but definitely lapsed when it was discontinued. The improvement was not sufficient in a profoundly retarded child at the age of two years to warrant hope that development could proceed to any worthwhile degree, and therapy was therefore discontinued except to the extent that it enhanced the comfort of the patient.

SUMMARY

A case of phenylpyruvic oligophrenia is reported in which cortisone, ascorbic acid and pyridoxine alone and in combination were tried.

The urinary excretion of phenylpyruvic acid with cortisone alone or in combination with ascorbic acid and pyridoxine was not changed. The comfort of the child, however, increased during cortisone therapy; eczema and pruritus were controlled and seizures were abated. The patient showed some general growth in mental acuity, emotional status and physical accomplishments. The experiment did not seem promising enough to continue the therapy in this child.

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California
MEDICINE

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RELATIVE VALUE SURVEY DEADLINE EXTENDED

At the 1958 session of the California Medical Association House of Delegates, it was unanimously ordered that the C.M.A. thoroughly survey the fees being charged by C.M.A. members throughout the State. A printed survey form was distributed to each C.M.A. member in mid-September.

A minimum of 40 per cent participation is required to obtain the weight of authority so essential to the successful use of the survey results.

Among other things, these results will be used for basic information as to fees currently being charged by the medical profession so that insurance companies, government agencies, labor unions and others interested in group purchase of medical care may avoid setting up plans entailing arbitrary and unrealistic fee schedules. Unless adequate participation is achieved, future efforts will have to be based on an out-dated study of fees of five years ago. Accordingly, the deadline for returns has been extended to December 1, 1958.

Every physician should make a special effort to complete and return the survey form and should urge his colleagues to do so.

EDITORIAL

Public Assistance Medical Care

When the U. S. Congress added the "George amendment" to H.R. 7225 in the 1956 session, few physicians paid much, if any, attention to it. The amendment provided a new method of allowing funds for meeting the medical expenses of certain beneficiaries of the Social Security Act.

The following year, when the California state Legislature adopted AB 679, to provide funds to match the federal appropriation under this Social Security amendment, there were no voices raised against it.

When, however, the state and federal laws became operative in October, 1957, physicians throughout California raised their voices in unmistakable protest.

The physicians found, overnight, that some of their private patients of long standing were on the receiving end of the welfare rolls and were suddenly entitled to visit a physician and have the welfare department pay the bill. The bill, however, was paid at a level adopted by the State Department of Social Welfare and only after the physician had signed various papers certifying to his diagnosis, his treatment and his agreement not to assess any additional fee against the patient.

County societies immediately started their own actions in opposition to this new law. Some circulated agreements among their members, who signed to the effect they would not accept patients under this program. Others offered the alternative of county hospital or clinic care for these eligible patients.

It is noteworthy that all such county society actions made provision for the care of the patients. It was the plan that was abandoned—not the elderly, the blind or the children eligible to receive medical assistance under the joint federal-state program.

Culmination of the medical protest against this program came in the CMA 1958 House of Delegates, when 20 separate resolutions were introduced on this one subject. The volume of proposals was so great that the Speaker of the House named a special reference committee to consider this one topic.

The reference committee came up with a single resolution which, despite many efforts to amend, was passed by the House of Delegates to become the governing policy of the California Medical Association in dealing with this problem.

One year has now passed since this program went into effect; six months have passed since the House of Delegates adjourned. The time seems appropriate for a review.

The resolution adopted by the House of Delegates was based on three words—"Reject, Repeal, Rectify." In simple terms, the House voted to reject the idea or philosophy of this program; it voted to attempt to repeal the enabling state legislation; it voted to correct shortcomings in the program if outright repeal could not be had.

The "reject" portion of the resolution spoke for itself. The press carried complete reports that the physicians of California did, in their own philosophy, reject the philosophy of AB 679, the enabling legislation passed by the state Legislature. This portion of the House of Delegates resolution appears to have been satisfied at the moment the resolution was passed. In legal language, *res ipsa loquitur*.

The "repeal" and "rectify" portions of the resolution presented still another problem. To begin with, these two words represent incongruous points of view. Repeal means "do away with it, get it off the books." Rectify means "change it so that it is more palatable." Obviously, both cannot be done.

In legislative procedure, a motion to amend a proposed law represents an implied approval if the amendment is adopted. In this sense, "rectify" signifies intended approval of the law if it is changed satisfactorily. "Repeal" means outright opposition under any circumstances.

The Council of the CMA has faced this dilemma since the 1958 House of Delegates adjourned.

Repeal of AB 679 has not been physically possible since the meeting of the House, for the simple reason that the Legislature has not been in session and thus has not had a chance to vote on a proposal for repeal. A poll of the members of the Legislature has indicated conclusively that a direct attempt at repeal would fall on deaf ears in that body. The Association has been represented at hearings held by the Senate Interim Committee on Social Welfare and has made known to that committee the thoughts expressed by the House of Delegates. To date, no member of the Legislature has been found who would even author such a bill.

Meanwhile, with even the bare posibility of repeal months away, the CMA Council has quietly but effectively gone about the business of "rectifying" the provisions of the law and its administrative regulations.

The House of Delegates resolution asked that control of the program be vested in the counties. This has been done to the extent possible under federal-state law.

The resolution asked that county societies cooperate with their local welfare departments in administering the program. This has been done statewide, with obvious benefit to all concerned.

The resolution asked for an acceleration of various pilot programs, including one to try doing away with fee schedules. To date three such programs have been proposed in separate counties and each has been accorded consideration by the State Board of Social Welfare. While none has yet been fully approved, the state agency has made it plain that it will entertain suggestions proposed by the county societies. Thus this section of the resolution is being actively prosecuted.

The resolution asked that prior authorization for the treatment of patients be done away with. This has already been done in some counties and will be done progressively throughout the state. This part of the resolution has been complied with.

The resolution asked that the system of dual payments be abandoned and a uniform method of payment established. The State Board of Social Welfare has agreed to this request and will establish a uniform method of payment when the preferred type of payment is determined by the physicians themselves. To date there have been technical questions which have delayed the accurate determination of a uniform method of payment desired by physicians, but this problem is under study and a valid determination will soon emerge, either statewide or on a county-by-county basis.

The final section of the resolution suggested that the Governor appoint one or more physicians as members of the State Board of Social Welfare. California will have a new Governor in January and proper representations can be made to him at that time. Obviously, a lame duck appointment at this time would serve no useful purpose,

Thus, despite the implications in some carping criticism, the CMA has not sat back idly. It has followed the instructions of the House of Delegates and is prepared to continue this process.

When the state Legislature meets next January and has a chance to review some of the changes that have been made in the federal law since its original adoption, further beneficial changes in this law will become possible. The present federal law will allow the state more latitude in its administration of this program and it is to be hoped that, with this greater freedom, state changes may be made to convert this welfare effort into something better for its recipients and for the physicians who care for them.

The CMA Council has remained alert to the need for change in the welfare program. Its committee of liaison with the State Department of Social Welfare has been extremely active in pressing for improvements and changes asked by physicians. The county societies have worked with their respective welfare departments in a most cooperative fashion.

Thus, with the "reject" portion of the 1958 resolution accomplished, and with the "repeal" portion nothing more than a hope during legislative recess, the "rectify" part of the House of Delegates policy seems to be well in hand.

California
MEDICAL ASSOCIATION

NOTICES & REPORTS

PUBLIC RELATIONS

An Action Program for the California Medical Association

MALCOLM S. WATTS
***Chairman*, Committee on Public Relations**

YOUR PUBLIC RELATIONS COMMITTEE has spent many hours in a discussion of the basic problems and objectives of medical public relations, and of the methods and techniques by which a forward-looking program may be carried out.

The Committee has concluded that a fundamental problem of present day medical public relations, and indeed of medicine itself, is the challenge to freedom of choice and freedom of action of both doctor and patient which is posed by other than traditional forms of medical practice such as panel medicine, health center medicine, government medicine and compulsory health insurance. An effective modern policy and program must propose to meet this challenge.

A STUDY IN SAN FRANCISCO

Five years ago a study committee of the San Francisco Medical Society surveyed the literature on medical public relations and canvassed the membership of the society for its criticisms and constructive suggestions. Each of the data obtained by these means was classified by the committee into one of five categories as follows:

1. A lessened emphasis on the personal relationship between the doctor and his patient, or a breakdown in this relationship.

2. A public faith in the capabilities of modern medical science above and beyond what is warranted by the facts. This is in many ways comparable to Ponce de Leon's search for the Fountain of Youth, and views modern medicine as a precise science, capable of giving everlasting life. Many people believing this are determined that this shall be theirs. Disillusioned, they are often resentful.

3. Problems relating to medical economics.

4. The consequences of isolation and specialization within our profession. The increasingly specialized doctor, engrossed in his technology, has tended to withdraw from the community and even from his colleagues, with the result that the position of leadership and respect enjoyed by the traditional "horse and buggy doctor" may be forfeited, and one specialty within the profession may even be unaware of the problems of another.

5. Cumbersome, awkward or inadequate communications and administrative procedures within the society.

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SOME BASIC FORCES IN OUR SOCIETY

The Committee recognized that certain powerful forces in our culture are at the root of the present-day challenge to freedom in medicine and to its public relations. These are inherent in the evolution of our democracy and are familiar to all.

1. Economic forces have resulted in increased costs, increased taxes, widespread deficit financing and the development of "fringe" benefits with the "third party" entering into the economics of medical care with its own interests to protect.

2. A fairly recent concept that the practice of medicine is essentially a commodity, consisting of diagnostic laboratory procedures, therapeutic pills, injections, operations and so forth, is held by many persons both within and without the profession. Accepting this concept, they logically believe that the practice of medicine should be handled as any other commodity and the techniques of mass production and mass distribution applied, as is done in the production and distribution of automobiles, for example.

3. The present day social trend which is shifting its emphasis from free enterprise toward the welfare state is of great importance. This force is very deep, very real, and fundamental to the challenge to freedom of action in medical care.

4. Political forces, because of the characteristics inherent in the democratic voting process, tend to move progressively in the direction of collectivism, and also to reflect the other forces described above.

THE DEFENSE TO DATE

The medical profession has instinctively opposed these trends as not being good for patients, doctors or the practice of medicine. What has been the defense to date?

1. In the economic field positive action has been taken in establishing Blue Cross, Blue Shield, other voluntary health insurance programs, relative value fee schedules, and the like. These measures, however, have not been adequate to meet the challenge. It seems unlikely that this basic challenge can ever be met with economic competition alone, because private medicine, by virtue of the individual physician's overhead, will probably always cost more than many forms of collective medical practice. Therefore, it is necessary that people be willing to pay more for the best medical care.

2. The defense against the concept of medical care as a commodity to be mass produced and mass distributed has been quite difficult. It turns upon such things as the art, as opposed to the science, of medicine, the importance of the doctor-patient relationship, and "better" medical care. These terms are poorly defined. Their meaning is vague. They have not been sold to the public, and the public, not understanding, cares little about them.

3. The defense against the social trend towards collectivism has been characterized by a nostalgic effort to return to the good old days. Emotional appeals have been used (Whitaker & Baxter), or the position taken that what is good for medicine is good for the public, an attitude similar to former Defense Secretary Wilson's, "What is good for General Motors is good for the country." The arguments used have depended heavily upon cliches such as "free choice" and "doctor-patient relationship" and our undocumented belief that private medicine is actually better for the patient.

4. In politics, the defense has been largely based on the quite effective use of pressure and persuasion in an effort to turn or at least to slow the tide. Legislators, special groups in the communities, and doctors themselves have been influenced. But the final analysis in terms of the basic challenge reveals a fatal weakness in this approach. The ultimate pressure weapon is the strike, and this will not be used. It is unthinkable to the profession; it would be unenforceable among doctors and would never be tolerated by the public. For these reasons the use of political pressure must be inadequate in any final test.

All of this presents a depressing picture. Many physicians believe that the political, social, economic and philosophic forces tending toward collectivism cannot be neutralized, and that it is only a matter of time until the socialization of medicine will occur. Others are more hopeful, feeling that the issue has yet to be decided.

SOME ASSETS

The Committee believes the present position can be strengthened to the point where the medical profession will be able to maintain what it believes to be the best form of practice for its patients. In the opinion of the Committee, some of the assets of this present position are as follows:

1. The quality of medical care rendered by California physicians is clearly an asset which should be evident to all.

2. Personal medicine is superior to various forms of collective medicine. But this must be demonstrated and the public convinced.

3. Many surveys show that people continue to want their own personal physician. Those who advocate other forms of medical practice must persuade them otherwise, and this is not always easy.

4. There is a fundamental desire for freedom present in every individual and this applies to a desire for freedom of action as far as his own

health is concerned. Basically he cares more about himself and his family than he does about any union or any collective notion.

5. Each doctor has a deep interest in the welfare of his patients and his fellow man. This, though sometimes lost sight of, is the basic drive which motivates physicians to undertake the study and practice of medicine. It is this interest of the doctor combined with the concern of the patient with his individual problems which results in the personal doctor-patient relationship.

6. It is a fundamental fact that in the long run what is best for the patient is always best for medical practice and for the doctor. This fact, too, has been lost sight of sometimes.

The Committee believes that if the basic challenge to freedom in medical care is to be met, the emphasis must be at the individual level. The individual chooses for himself, for his family, for his group, for his union or at the ballot box between personal medicine and some other form of medical practice. If the individual is convinced that private medicine is best, the political, social and economic aspects of the problem will work themselves out. A major asset lies in the fact that personal medicine can have its strongest influence at the level of the individual where the personal physician renders his personal service. Panel medicine and other forms of collective medicine are weaker at this point.

THE INDIVIDUAL IN OUR SOCIETY

It is appropriate to consider the position of the individual in our society in relation to medicine's public policy and public relations. Our democratic tradition holds that everyone is free and equal. But it is obvious that no one can be completely free and equally obvious that people are not all equal. In the evolution of our democracy the element of freedom has lost some of its impact and the element of equality, which is inherent in collectivism and in the desire for security, has gained strength. This was predicted more than a century ago by Alexis de Tocqueville. The principle of majority rule inherent in democracy tends to emphasize collective interests over those interests of the individual, which are different from the group. At the ballot box the voter often may choose only among alternatives presented by various pressure groups representing special collective interests. There is infrequently a pressure group or collective interest representing the voter's desire for personal and individual freedom. Consequently, over the years the trend is inevitably toward collectivism unless a neutralizing or opposing force is brought to bear.

But the nature of the individual does not change and the desire for individual freedom remains strong. History emphasizes this unceasing, dynamic struggle to achieve a balance and shows that each time collective security becomes too binding there is reversion or revolt towards freedom. The idea of freedom is particularly rooted in the history of our own nation. Together with security, it is a need of every individual. This desire for personal freedom is the force which must be mobilized and made strong enough to neutralize the trend toward collectivism in medical care.

THE ROLE OF THE PROFESSION

It would appear that organized medicine is in a strong position to champion the individual's desire for personal freedom, together with his need for security, particularly as it relates to his medical care. There is an established local, state and national organization. There is the long tradition of the doctor's personal interest in the individual patient. Indeed, this is the *raison d'etre* of the medical profession. It is the crux of the traditional doctor-patient relationship. Therefore it follows that if it is in the best interest of the individual to achieve a balance between his desire for freedom and his desire for security, both in solving his personal problems and in his need for medical care, then this must be the goal of his doctor. That which is good for the patient and that which is good for the medical profession are fundamentally identical.

It is noteworthy that under some conditions collective medicine is actually in the best interest of the patient. This occurs whenever what might be called "epidemic" conditions exist and the principle of the greatest good for the greatest number actually becomes the best interest of each individual under the circumstances. Historically organized medicine has without question entered into collective forms of medical practice when such "epidemic" conditions prevail. This occurs in military medicine with its threat of epidemic injuries, in civil defense programs, in public health where there is a threat of epidemic disease, and occasionally where groups of people are isolated from access to ordinary medical care.

But medical care problems in this country are normally "endemic," not "epidemic." Under the usual conditions the individual himself is the primary concern, personal medicine serves his interest better and the best result for each individual is not synonymous with the greatest good for the greatest number.

A PROGRAM OF MEDICAL PUBLIC RELATIONS

Under the present circumstances, and to meet the challenge to freedom of choice and freedom of action of both doctor and patient in medical practice, the following concepts are suggested as fundamental to a timely program of public relations and public policy:

1. The personal character of our medical practice must be emphasized.

2. The doctor and the medical profession must be identified with the desire present in every individual for freedom of action, particularly in matters pertaining to his health and welfare.

3. The doctor-patient relationship, with its special concern with the individual as such, must be extended to public relations and to public policy. The doctor-patient relationship between organized medicine as physicians and the community as a group of individuals, must become a social reality.

4. The interest of the doctor and the profession in the individual must be extended to include his political, social and economic predicament as it involves his medical care. In each instance that which is best for the individual or for the groups of individuals under the existing circumstances should be supported.

5. The emphasis of public policy and public relations must be shifted from what is good for medicine to what is good for the public or good for the patient. Actually, in the long run, these are identical.

To illustrate the last points from the public relations standpoint, two recent examples are cited. The first emphasized medicine and the doctor's interest, and the second, the patient and his interest. During the recent legislative hearings on the Department of Social Welfare's Medical Assistance Program, several statements made by physicians gave rise to unfavorable editorial comment and antagonistic "letters to the editor." These physicians were quoted as having stated that the bill "subjugated medical personnel," "demeaned the physician's personal dignity," "degraded medical care to the lowest level," "deprived doctor of his soul-satisfying feeling that he is charitable," "third party medicine is a violation of our rights as physicians." Statements such as these, reflecting the attitude that what's good for medicine is good for the State, were received unsympathetically by the press and by the public.

On the other hand, the House of Delegates' Resolution No. 28, which dealt with basic medical rights for the individual, achieved prompt and wide acceptance. Within a few weeks, its principle was accepted by the American Medical Association House of Delegates and more recently, by the United States Senate. It is noteworthy that when the emphasis was on the doctor and his special interests, the result was a poor public reaction, and when the emphasis was on the patient and his interest, the result was good.

The Committee reviewed its capability for action in terms of this evaluation. It believes that it has a basic policy in the 1956 Public Relations Committee report which was approved by the House of Delegates. This report recommended that the public relations program of the California Medical Association should:

1. Emphasize the interest of the medical profession in the individual and strengthen the doctor-patient relationship.

2. Emphasize the capabilities and limitations of modern medical science and point out that it is not a commodity which can be mass produced and mass distributed but an individual service which is rendered on a personal basis.

3. Intensify the efforts of the profession in the field of medical economics with emphasis both on the patient's desire for freedom of action and his need for secure protection.

4. Continue the program to improve constantly the service rendered by individual physicians to their patients.

Realizing that public relations is essentially a problem in communications the Committee has considered both the internal and external communications of the California Medical Association. Internal communications with our individual members are carried out through *Newsletter*, CALIFORNIA MEDICINE, various programs and publications of the county societies, and the annual visit of the President or President-Elect to the component societies. The Committee also noted that the Councilors themselves are a valuable channel of communication with the membership. Consideration was also given to mechanisms for internal coordination of public relations policies and programs at California Medical Association level. External communications, by which is meant communications between the medical profession and the public, were discussed. Techniques for use in the doctor's office, by county societies and by the California Medical Association, were considered.

The Committee also has given attention to certain areas of needed study. In the present circumstances it is considered imperative that convincing arguments and objective data be developed to:

1. Substantiate the belief that personal medicine is better than collective medicine under "endemic" conditions.

2. Characterize the doctor-patient relationship and demonstrate its importance to a public which understands it poorly and is apathetic toward it.

3. Demonstrate the importance of freedom of action by the individual in his medical care in a way which will be convincing to a person who believes otherwise.

4. Differentiate clearly the advantages of group medicine which is recognized and approved within the framework of organized medicine from the disadvantages of closed panels, which are not.

IMPLEMENTATION OF A PUBLIC RELATIONS POLICY

The implementation of a public relations policy consists of good performance both on the part of the individual physician and on the part of each component of organized medicine. This good performance includes the practice of the best medicine and also an *esprit de corps* in the profession, good public performance, sound policy, good leadership, effective communications, internal and external educational programs and a thousand other things. It includes every event in every doctor's office. It includes every action or inaction of every medical society. It includes every public utterance of every physician whether it is official or unofficial.

IN SUMMARY

The historic forces toward collectivism and security are frighteningly strong. The balancing force, the desire of the individual for his freedom, is relatively latent and unchampioned. Each individual and each group in the history of human civilization has tried to balance the needs for freedom and for security. The doctor helps his patient achieve this balance in his personal problems in terms of his capabilities and disabilities. This interest must now be extended to include the problems of the individual in matters pertaining to his medical care in relation to modern political, economic and social pressures.

The doctor and organized medicine must extend this traditional doctor-patient relationship to help the individual as a voter to balance the ideals of freedom and security in medical care and must act as physician to the community in accomplishing this. Such activity can be an expression of the deeply powerful and emotional drive in each doctor to serve the best interests of his patient, whatever may be his circumstances. A successful program of public policy and public relations must be an expression of this traditional concern with every individual who is or may become the patient, as distinguished from the collective concept of medical practice as a tangible commodity suitable for mass distribution, which at best, can only achieve the collective goal of the greatest good for the greatest number, which might or might not happen to include any individual patient.

A Statement on Newspaper Reports on a Study of Hospitals

A statement of the California Medical Association, presented in its behalf by Howard Hassard, CMA legal counsel, before the Subcommittee on Hospitals of the Assembly Committee on Public Health. San Francisco, August 30, 1958.

Mr. Chairman and members of the Committee:

The California Medical Association is glad to meet with you for a discussion of recent news reports which have indicated to you the possible need of looking into the practices of some physicians and some hospitals in California.

The California Medical Association is a nonprofit membership association, in which membership is voluntary. The Association is made up of a federation of 40 county medical societies in the state, each of them autonomous in its own actions and decisions. The Association, in turn, federates with other state and territorial medical associations to form the American Medical Association.

The purposes of the Association are clearly set forth in its Constitution. They are enumerated as "to promote the science and art of medicine, the protection of the public health and the betterment of the medical profession; to promote similar interests of its component societies . . ."

The clear language of these constitutional provisions has been rigidly followed for the past 102 years.

Constantly seeking improvement, the CMA several years ago embarked on a series of studies of the relationships between physicians and their patients. We sought to learn why some patients are happy and enthusiastic in their relationships with their own physicians and others are not.

These studies were undertaken as the groundwork for seeking the causes for medical malpractice actions that have been finding their way into our courtrooms in increasing numbers and severity in the past decade or so. The cost of these actions has been high but, more important, there is the underlying question of why such actions should ever arise in the first place. If the correct answer can be found to that question, the welfare of all will be materially benefited.

We have long recognized that medical malpractice actions are in some measure what we call "poor public relations gone to court." Since each such action represents a patient on one side and a physician on the other, we must get down to the original point of contact between a patient and a doctor.

To start from this point the Association has called upon various of its regular and special committees to study the relationship between physicians and patients. It has also retained outside consultants, including technical services by Stanford Research Institute. In fact, the CMA has spent in cash $178,157 in this endeavor during the past three years.

The first such study (1955) was made in the form of an analysis of physicians who had had malpractice suits filed against them. Contrasted with these physicians was a control group of physicians in comparable situations who had not had such suits. This pilot study—called the San Mateo Project—led to further research.

Another study was made on patients who had been plaintiffs in malpractice actions, contrasted with a control group of patients who had not been involved in such litigation. A summary of this study was published and sent to each county medical society and to each member of the Association. We have now distributed 20,000 copies of this summary.

More recently, and simply because there was evidence to show that some 70 per cent of malpractice actions arose from patients who have been hospitalized at the time of the alleged incident, we have sought to find out what happens in some hospitals that results in a high incidence of such actions. For the motivational research scientist to work it is necessary for him to use known contrasts or extremes. Thus four hospitals with the highest malpractice rates were selected to be compared with four hospitals with the lowest malpractice rates. Scientifically speaking, it would have been a surprise if the research had not disclosed strong contrasts.

These studies have been made by consulting psychologists. Prior to the current study, the research team prepared a written report and submitted it—for critical comment—to a panel of distinguished scientists in the humanities. After their revisions, the final report was prepared and submitted to the CMA. The most recent study was sent to the Board of Review a brief fortnight ago. Almost immediately a Scripps-Howard reporter commenced publication of excerpts—mostly from pages 149-150 of a 341-page document. It is this most recent study which has found its way into the press even before the appropriate committee of the CMA has had a chance to review and evaluate it.

The CMA has long realized that studies of this nature constitute in each instance a fragmentary part of an overall study which by its very nature must be on a long-term basis. The current report, together with a number of other reports, must be calmly appraised and evaluated. Its findings must be fitted together with other findings. Its validity must be established and its relative importance assayed before a mature and sound conclusion can be reached upon which the CMA might institute a program to improve any conditions found to be anything less than desirable.

It is unfortunate that the press stories which have appeared—and which have caused your committee to gather today—have been pretty much restricted to a few verbal, unverified items.

CASE IN POINT—The San Francisco *News*, Tuesday, August 26, 1958, carried this banner headline "SECRET HOSPITAL REPORT—DOCTOR HATED KAISER SO LET A MAN DIE." Such a statement is unbelieveable to any thinking person. Its accusation is so abhorrent that it demanded above all else an immediate investigation of the facts.

Here are the facts:

In the report, on page 149, a reference to Hospital "F-2" contains a series of anonymous statements, unidentified in the report as to source. In fact, the authors, on page 146, say:—"Informal Reports—During the course of the research, a good number of informal comments . . . unsolicited information, came to the attention of the investigators. Ordinarily, such materials are considered to have questionable value. . . . As with other verbal material we cannot authenticate what is said. . . ."

One of the anonymous accusations freely quoted in the press is that a physician on emergency duty at F-2 hospital found that an accident victim belonged to a closed panel health plan, that the physician hated the particular plan so he had the patient put back in the ambulance and sent to the closed panel hospital, a few miles away, and the patient was dead on arrival. Although the report is anonymous and although the California Medical Association did not know the names of the hospitals studied, it was possible from the newspaper information to determine the general location of Hospital F-2.

Examination of public records at the courthouse in Martinez, discloses the case of Black vs. Wise. This lawsuit was started in February, 1956, and was tried before Judge Wakefield Taylor and a jury, about two months ago. The facts—the plaintiff alleged wrongful death; Black, a 29-year-old white male steelworker some time after leaving work drove his auto into a tree; was severely injured and was taken by ambulance to the emergency room of a nearby hospital. Dr. Wise was in attendance. After examination, and disclosure by Black that he belonged to a nearby medical panel plan, Dr. Wise had him put back into the ambulance and sent to the plan's hospital in the same county. He was dead on arrival. In the trial it developed that Black had a severe head injury, that Dr. Wise, a general practitioner, was not trained in brain surgery, that Dr. Wise thought the panel hospital did have a specialist for this type of injury, that the patient was sent to the panel hospital because of these facts and that Dr. Wise had no prior anticipation that he would not survive the journey. The Coroner's death certificate reads, "cerebral contusions—pulmonary edema—alcoholism." The result: The jury voted 11-1 to exonerate the doctor.

Regardless of the result of the lawsuit, one wonders why these facts could not have been checked. Just a few weeks ago, the public press in Contra Costa County fully reported the trial of the case.

In the past few days, the California Medical Association offices and county medical society offices have had inquiries from members of the public indicating anxiety and querying us about what action medical societies take to protect the public.

Medical societies constantly strive to maintain higher standards amongst their members and to discipline those found wanting. In fact in the same county to which I have previously referred, the Alameda-Contra Costa Medical Association, after formal hearing, expelled a physician for conduct detrimental to the welfare of his patients. This physician then sued the Association. The case was tried in Martinez and the Association's action upheld. It was then appealed to the higher courts and the Association's action again was upheld in part and modified in part. This case dragged through the courts for years and was just recently concluded. There are two sides to the coin—the Alameda-Contra Costa Medical Association to maintain high ethical standards spent thousands of dollars in legal costs, but to its credit it persevered.

Right now in Central California an entire medical staff of a hospital is being sued. Why? After extensive study it decided that one of the physicians on the staff was inadequately trained to perform the surgical procedures that he undertook. On the staff recommendation he was dropped from the staff. The result: Everybody is now sued and facing expensive, lengthy litigation.

As attorney for medical societies, may I emphasize that remedial action can only be taken after thorough investigation. It is easy for nonresponsible third parties to say "throw the rascals out" but our law protects property and personal rights. Due process means one is innocent until proven guilty. Again as attorney for the societies, it is my duty to advise against hasty actions or actions based on personality rather than on facts or on conclusions derived from anonymous claims unsupported by provable facts. Within the framework of law, all charges, anonymous or otherwise, found in the research team's report will be investigated and if the facts warrant, prosecuted.

It is the position of the California Medical Association that all studies into the physician-patient relationship should be made on a calm and professional basis as a means of establishing grounds for bettering the medical care available to the patient. If these research studies cannot be carried out in an atmosphere of confidence it is obvious that such studies cannot be made.

Psychological research into the behavior patterns of patients and physicians is not the sole effort of the California Medical Association in the field of malpractice suits. In cooperation with the State Bar, the California Medical Association has instituted, developed, and is actively encouraging local medical expert panel systems, under which independent and qualified physicians on a voluntary basis will consult with and advise attorneys having clients who have a grievance against a physician. This system, jointly sponsored by the State Bar and the California Medical Association, is described in articles published in the State Bar's *Journal* and in CALIFORNIA MEDICINE, the California Medical Association's publication, in February of this year. It received widespread commendation in the public press. It is in actual being in Los Angeles County; it is in the process of establishment in San Diego, Alameda and San Francisco Counties. While it is new and experimental, the California Medical Association sincerely hopes that time will prove its worth and that the public interests will be served.

In summation, the California Medical Association and its component county societies now recognize and for some years have recognized the need of constantly improving medical standards; have made numerous and costly investigations into means of improving such standards; have maintained a disciplinary system under which erring members may be subjected to professional punishment; have set up panels of physician experts to serve in lawsuits filed against their own members; in short, have devoted their efforts to a continuing program of self-improvement designed to benefit the patient.

The Joint Commission on Accreditation of Hospitals has for many years formulated standards for hospital accreditation. Should a careful review of the findings of this current study indicate the need for additional standards to be set up or more extensive inspection to be provided, the California Medical Association pledges that it will enthusiastically cooperate with the California Hospital Association and the Joint Commission on Accreditation to draft additional standards and safeguards that may be indicated.

We readily recognize the public interest which your committee represents and your natural desire to look behind the smoke and try to locate any flames. If in your wisdom your committee decides to look more closely into these matters, the California Medical Association stands ready to offer you every cooperation and assistance at its command.

Certified Psychologists

On August 18 of this year, the California Board of Medical Examiners certified 508 psychologists in this State. This was carried out under Chapter 6.6 of the Business and Professions Code which became effective in September, 1957.

This certification represents the culmination of many years of discussion between committees of the California State Psychological Association (CSPA) and the California Medical Association (CMA) on the role of psychologists in California.

Since World War II, there has been a sizable increase in the number of psychologists trained for teaching, for research, for work in schools and industry, and for clinical practice. In two fields, industrial and clinical, the growth has been more pronounced. Industry has turned to psychologists for professional counsel on the application of psychological principles to the selection, utilization, development and coordination of human resources; for personnel and consumer research.

The shortage of psychiatrists, coupled with the need and demand for the particular training and skills of clinical psychologists, has led to increased utilization of them in hospital and other clinical settings. Their role generally involves diagnostic testing, individual counseling and group psychotherapy. A relatively small number of clinical psychologists are engaged in the private practice of counseling, clinical testing and psychotherapy.

The increase in demand for services has also led to the appearance of many unqualified persons calling themselves psychologists, often without adequate training, some with credentials from "diploma mills." Both the medical profession and the well trained ethical psychologists have been alarmed at the absence of control over these unqualified persons and absence of regulation of their activities, even when obviously harmful to individuals seeking their counsel.

The many discussions of CMA and CSPA committees led to introduction of a certification measure that would indicate clearly which persons have had adequate training, and that would certify qualified psychologists. While many psychologists, particularly those in academic (teaching), research, school or industrial settings, are not involved in medical matters, it was agreed that the public would best be protected by having all psychologists certified by the Psychology Examining Committee under the Board of Medical Examiners. This would not interfere in any way with the qualified psychologist in whatever field he might be working, but would offer controls over those psychologists engaged in private practice of counseling and psychotherapy.

The legislation spelled out the education and training requirements for certification as a psychologist: a Ph.D. degree in psychology from a recognized university and three years of approved clinical practice, or an equivalent as defined under the Code and determined by the Psychology Examining Committee.

Since 1951 referrals to psychologists for psychotherapy or other services for which psychologists are qualified by training and experience has been lawful (Business and Professions Code, section 2013). However, the legal medical responsibility for the welfare of the patient continues to rest with the referring physician.

The certification legislation, thus, in no way conflicts with the Medical Practices Act. . . ."Nothing in this chapter shall be construed as permitting . . . the administration or prescription of drugs, any infringement upon the practice of medicine as defined in the laws of this State or the use of therapeutic measures in the diagnosis or treatment of the mentally ill except in collaboration with a physician and surgeon as specified in Section 2013 of this Code."

Under the Certification Act, the practice of psychology is defined as "the application of established principles of learning, motivation, perception, thinking, and emotional relationships to problems of personnel evaluation, group relations, and behavior adjustment, by persons trained in psychology. The application of said principles includes, but is not restricted to, counseling and the use of psychotherapeutic measures with persons or groups with adjustment problems in the areas of work, family, school, and personal relationships; measuring and testing personality, intelligence, aptitudes, emotions, public opinion, attitudes, and skills; and doing research on problems relating to human behavior" (Business and Professions Code, section 2903.5).

As of January 1 of this year, only persons with qualifying credentials are allowed to use the title of *Certified Psychologist.* Thus, of the original 1800 who filed under the Act, nearly 900 will be *uncertified.* The uncertified may continue to call themselves psychologists (but *not* certified psychologists) under 2933.5 of the Business and Professions Code until 1965, which gives them seven more years to qualify for certification.

Only *Certified Psychologists* will be listed in the Directory of the Board of Medical Examiners. Of the initial 508 Certified Psychologists, 217 are in academic settings (such as teaching, school psychologists and research in universities) 146 are in other institutional settings (such as Veterans Administration and Civil Service); 48 are in industrial settings; and 97 are in private practice, mostly in the areas of concentrated population.

The Psychology Examining Committee and the Mental Health Committee of the C.M.A. have been meeting regularly and plan further meetings to promote mutual understanding and effective working relationships for their respective professions. Any problems which may emerge will, under this arrangement, receive joint attention.

Council Meeting Minutes

Tentative Draft: Minutes of the 440th Meeting of the Council, San Diego, El Cortez Hotel, September 13 and 14, 1958.

The Council met on September 13, 1958, in the El Cortez Hotel, San Diego, for an informal discussion of basic philosophies and principles, such as consideration of such phrases as "free choice of physician," "third party" and other items which enter into current discussion of socio-economic problems. This day-long session was not recorded and minutes were not prepared on the informal discussions which took place.

Official minutes of the September 14, 1958, meeting follow:

The meeting was called to order by Vice-Chairman Sherman in the El Cortez Hotel, San Diego, on Sunday, September 14, 1958, at 9:00 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron and Councilors MacLaggan, Wheeler, Todd, Foster, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Harrington, Davis, Sherman, Bostick and Teall.

Absent for cause: Councilor Lum, Secretary Daniels and Editor Wilbur.

A quorum present and acting.

Present by invitation during all or part of the meeting were Messrs. Hunton, Thomas, Clancy, Gillette, Whelan and Collins of C.M.A. staff; Messrs. Hassard and Huber, legal counsel; Messrs. Read and Salisbury of the Public Health League of California; county society executives Scheuber of Alameda-Contra Costa, Jensen of Fresno, Geisert of Kern, Pettis and Field of Los Angeles, Marvin of Riverside, Foster of Sacramento, Donmyer of San Bernardino, Nute of San Diego, Neick of San Francisco, Donovan of Santa Clara, Dermott of Sonoma and Grove of Monterey; Messrs. Wahlberg and Lyon and Doctor William Gardenier of California Physicians' Service; Doctor Malcolm Merrill, state director of public health; Doctor John Keye, medical director of the State Department of Social Welfare; Doctor Dan O. Kilroy, legislative chairman; and several physicians representing, as officers or council members, county societies in Santa Clara, Riverside, Kern, San Bernardino and San Diego Counties.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 439th Council meeting, held August 16, 1958, were approved.

2. *Membership:*

(a) A report of membership as of September 10, 1958, was presented and ordered filed.

(b) On motion duly made and seconded, 15 delinquent members who had met their dues obligations were voted reinstatement.

(c) On motion duly made and seconded in each instance, two applicants were voted associate membership. These were: Margaret R. Leftwich, Santa Clara County, and A. C. Atwood, Stanislaus County.

(d) On motion duly made and seconded, it was voted to reduce the dues of one applicant because of illness.

3. *Financial:*

(a) A report of bank balances as of September 10, 1958, was presented and ordered filed.

(b) Chairman Heron of the Finance Committee reported that the Association must plan for funds needed to complete the purchase of a headquarters building next July 1. He also asked that the Council give additional thought to financial demands for the establishment of a department of research, which would require an increase in dues.

4. *Commission on Medical Services:*

(a) *Rehabilitation:* The Committee on Rehabilitation presented a statement and guide for the assistance of county medical societies in establishing their own machinery to deal with rehabilitation problems. Upon approval of this statement and guide, the committee proposed to send copies to the county societies. On motion duly made and seconded, it was voted to approve the statement and guide and to forward copies to the county societies.

(b) *Public Welfare:* Doctor Leslie B. Magoon and associates, representing the Santa Clara County Medical Society, requested the Council to approve a plan suggested by the county society under which an indemnity type of payment for medical services rendered under the public assistance medical care program would be instituted. On motion duly made and seconded, it was voted that the Council approve and support the effort of the Santa Clara County Medical Society to establish its proposed indemnity pilot program in the California public assistance medical care program.

Discussion was held on the advisability of publishing the results of a poll taken of Association members several months ago as to their preferences for a uniform method of payment for services provided under the public assistance medical care program. On motion duly made and seconded, it was voted to adopt the following statement:

"Careful review of experience developing since the poll was taken suggests that the development of a uniform method of payments must be consistent with the development of pilot programs and local control on the county level as required by *Resolved* No. 3 of House of Delegates Resolution No. 1. The poll is inconsistent with this point of view. We therefore recommend that a new poll of the membership be organized on a county basis as desired by each county society concerned.

"In the light of subsequent developments the existing poll is inadequate.

"Pending the completion of such a subsequent poll, the existing poll shall guide deliberations of the C.M.A. Council and committees."

Doctor John Keye, medical director of the State Department of Social Welfare, reported that audits of medical bills under the public assistance medical care program would be carried out through California Physicians' Service review boards in those counties where C.P.S. acts as fiscal administrator. In other counties, the county societies will be called upon by local welfare directors to establish suitable review boards.

5. *Commission on Professional Welfare:*

Doctor Kirchner, chairman of the Medical Review and Advisory Board, suggested that Resolution No. 14 of the 1957 House of Delegates be referred to the Liaison Committee to the State Bar of California. On motion duly made and seconded, it was voted to so refer.

Doctor Kirchner reported that the American Hospital Association had requested the cooperation of the Medical Review and Advisory Board in producing and distributing a film on medical malpractice. The Board has approved this request and will report to the Council on later developments.

Mr. Fred Field, legal counsel to the Los Angeles County Medical Association, reported on a study being made on a claims prevention program which would utilize committees of the society. Further reports will be made on this study.

Doctor Kirchner reported that a subcommittee of the Board, consisting of Doctors William F. Quinn, William Kaiser and James Yant had been appointed to make a thorough study of a report recently received from a psychological consultant and report back to the Board. On motion duly made and seconded, it was voted to approve this subcommittee.

On motion duly made and seconded, it was voted to refer to the Committee for Emergency Action several communications which had been received from parties interested in the psychological report.

On motion duly made and seconded, the following resolution was adopted:

Resolved: That the Council request:

(1) The Committee for Emergency Action meet with the hospital staff of the Pittsburg Community Hospital.

(2) The newly appointed subcommittee of the M.R.A.B. immediately go into the facets of the Blum report and make their recommendations for future action on this report to the M.R.A.B. and the Council.

(3) The Council, through its president, Dr. West, make overtures to the California Hospital Association to form a joint committee to study this and other problems regarding doctor-hospital relations.

6. *Commission on Public Health and Public Agencies:*

Doctor Bostick reported that the budget of the State Department of Public Health now under preparation would include funds for work on radiation hazards.

Doctor Bostick proposed that Doctor Chester Barta of San Diego be named as the Association's representative at the forthcoming Governor's Conference on Traffic Safety. On motion duly made and seconded, this nomination was approved.

Doctor Bostick also reported that the Crippled Children's Service was considering the addition of epilepsy as a disease entity coming under the service's program. A subcommittee of the Advisory Committee to Crippled Children's Service is now studying this proposal and, on motion duly made and seconded, it was voted to consider the recommendations of this subcommittee before the Council adopts a policy.

7. *Committee on Nominations:*

Doctor Bostick, as chairman of the Nominating Committee, recommended that Doctor Stuart Knox be appointed a member and chairman of the Committee on Mental Health. On motion duly made and seconded, this appointment was voted.

Doctor Bostick also proposed that Doctors C. Morley Sellery of Los Angeles, J. P. Conrad, Jr. of Fresno and William C. Chiapella of Chico (Sellery, chairman) be appointed as a liaison committee to the California Teachers' Association. On motion duly made and seconded, these appointments were approved.

8. *Commission on Public Policy:*

(a) Mr. Ed Clancy gave a progress report on activities of the Committee on Public Relations and its department.

On motion duly made and seconded, the Council voted the following resolution:

WHEREAS, Glenn Gillette has served the California Medical Association ably and well after having been executive secretary of the Fresno County Medical Society; and

WHEREAS, Glenn has been selected as one of the field representatives of the American Medical Association; and

WHEREAS, his services will continue to be available to the medical profession, so that the California Medical Association's loss is the American Medical Association's gain; now, therefore, be it

Resolved: That the Council of the California Medical Association express to Glenn Gillette its best wishes for his happiness and success in his new appointment and its thanks for his valuable services to the California Medical Association.

(b) Doctor Dan O. Kilroy, chairman of the Committee on Legislation, suggested that representatives of the legislative committee attend meetings with hospital representatives on matters raised by a recent psychological study.

On motion duly made and seconded, it was voted to invite Doctor J. Lafe Ludwig, a member of the legislative committees of both the C.M.A. and A.M.A., to attend Council meetings and make reports on national legislative matters.

Mr. Hassard reported that a meeting had been held with representatives of the American Cancer Society, California division, relative to legislation to provide cancer control measures.

Doctor Kilroy reported that a committee of state officials had recommended that standardized fees be adopted and paid by all departments of the state government which pay for medical care for individuals. Under the proposal the Relative Value Studies would be used, with a $3.50 factor for the surgical and a $4 factor for other sections. On motion duly made and seconded, it was voted that the C.M.A. recommend to the State Department of Finance the concept of paying the going rates as determined by current usual fee surveys by county units, with due consideration of the nature of the program to be served.

On motion duly made and seconded, it was voted that each county society be asked to advise the Association on what basis it considers that fees for the county area should be based, whether an average fee, median, model or third quartile.

9. *California Physicians' Service:*

Doctor Heron reported that California Physicians' Service now has 753,000 beneficiary and 13,798 physician members.

10. *Proposal for Research Department:*

Doctor West reported for an ad hoc committee which considered the advisability of establishing a research department within the Association. Discussion resulted in several amendments to the committee's report, which, on motion duly made and seconded, was approved as amended.

11. *Annual Session:*

A report of the Committee on Scientific Work, outlining some of the plans for scientific meetings at the 1959 Annual Session, was presented and approved as a progress report. The Council also voted on two proposed scientific exhibits on which the Committee on Scientific Work has sought Council advice.

12. *California Pharmaceutical Association:*

On motion duly made and seconded, it was voted to approve a request from the California Pharmaceutical Association for appointment of a liaison committee for the discussion of problems of mutual interest and to name the Committee on Other Professions as the body to form such liaison.

Time and Place of Next Meeting:

The chairman announced that the next Council meeting would be held in San Francisco on Saturday, October 11, and the November meeting in Disneyland on Saturday, November 8, 1958.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:45 p.m.

SAMUEL R. SHERMAN, M.D., *Acting Chairman*
JOHN HUNTON, *Acting Secretary*

PROPOSED CONSTITUTIONAL AMENDMENTS

Five proposed amendments to the Constitution of the California Medical Association were presented at the 1958 House of Delegates. Under the terms of the Constitution, these proposed amendments must lie on the table for one year, or until the next regular session of the House of Delegates. Meanwhile, they must be published at least twice, in separate issues of the official journal.

All members of the Association, and especially the members of the House of Delegates, will thus have the opportunity to review these proposals during the coming year. They will be presented to the 1959 House of Delegates for vote, on which a two-thirds affirmative vote of those Delegates present and voting is required for passage.

SECRETARY-(TREASURER)

Constitutional Amendment No. 1.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Article VI, Section 1, of the Constitution be amended by deleting the term "-Treasurer" from the present term "Secretary-Treasurer" so that the named officer shall be known as "Secretary."

* * *

REPRESENTATION IN HOUSE OF DELEGATES

Constitutional Amendment No. 2.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part A, Section 2, of the Constitution of the California Medical Association be amended by deleting the words shown in parentheses below, so that the section shall read as follows:

Section 2—Representation

As the By-Laws shall provide, each component society shall be entitled to proportionate representation in the House of Delegates (but with a minimum of two delegates).

* * *

REPRESENTATION ON THE COUNCIL

Constitutional Amendment No. 3.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part B, Section 9, of the Constitution be amended in subparagraph (a) by deleting the words shown in parentheses below and adding the words shown below in italics, so that subparagraph (a) shall read as follows:

(a) Each Councilor District, as specified in this Constitution, shall be entitled to one Councilor for each 1,000 *active* members, *or major fraction thereof,* according to its membership as of the first day of (November) *September* of the preceding year; provided that each Councilor District shall be entitled to a minimum of one Councilor.

* * *

DELEGATES FROM SECTIONS

Constitutional Amendment No. 4.
Author: A. B. Sirbu.
Representing: San Francisco Medical Society.

WHEREAS, The scientific sections constitute an important part of the structure of the C.M.A.; and

WHEREAS, The sections are not represented in the legislative body of the C.M.A., the House of Delegates; and

WHEREAS, The sections of the A.M.A. have for many years been represented in its House of Delegates; and

WHEREAS, Each section of the C.M.A. has much to contribute toward policy making, both in the scientific and the economic phases of medicine; now, therefore, be it

Resolved, That each section of the C.M.A. be entitled to send one delegate with full voting rights to the House of Delegates of the C.M.A.; and be it further

Resolved, That the C.M.A. Constitution be amended to allow for such representation as follows: Article III, Section 1 amended by the addition of (e) Delegates elected by each scientific section as listed in Chapter IV, Section 1-a of the By-Laws.

* * *

CONSIDERATION OF CONSTITUTIONAL AMENDMENTS

Constitutional Amendment No. 5
Author: W. S. Lawrence.
Representing: Butte-Glenn Medical Society.

WHEREAS, Any amendment to the Constitution should be for the greatest good of the Association; and

WHEREAS, The most recent amendment to the Constitution which eliminates the Councilors-at-Large was passed without prior hearings in the appropriate reference committee during any regular session of the Association; and

WHEREAS, This action has denied interested delegates the opportunity to meet, exchange views, discuss the ramifications and evaluate the appropriateness of the Amendment to meet its purpose; and

WHEREAS, The proponents of the amendment would be the last to feel the necessity to press such an action through the House of Delegates without adequate consideration; now, therefore, without prejudice to the previous amendment, be it

Resolved: That Article VIII, Section 3, Paragraph 2 of the Constitution be amended by addition of the following:

"Further, such proposed amendment or amendments shall be referred to the appropriate Reference Committee who shall hold hearings on the proposed amendment or amendments during the course of its regular business while the Association is in convention. If the proposal or proposals are introduced during the first session of the House, hearings shall be held at both the current and the next regular meeting. If the proposal or proposals are introduced during the second session, hearings shall be held at the next meeting, and in either event, prior to submission to the House of Delegates for vote.

BY-LAW AMENDMENT OFFERED

One By-Law amendment was offered at the April session of the House of Delegates by Reference Committee No. 4, the committee to consider proposed amendments to the Constitution and By-Laws. Since all proposed amendments to the By-Laws are required to lie on the table for 24 hours before being acted upon, this amendment must await the next regular session of the House of Delegates before it can be voted upon. The proposed amendment to the By-Laws reads as follows:

AMENDMENT TO BY-LAWS

By-Law Amendment No. 1.
Author: J. B. Price.
Representing: Reference Committee No. 4.

Resolved, That Chapter VII, Section 1, of the By-Laws be amended as follows:

First, delete subsection (b) and insert

"(b) *Commission on Public Health,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Rural and Community Health,
2. Committee on School Health,
3. Committee on Mental Health,
4. Committee on Industrial Health.

"(c) *Commission on Public Agencies,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Military Affairs and Civil Defense,
2. Committee on State Medical Services,
3. Committee on Veterans Affairs,
4. Committee on Other Professions,
5. Committee on Blood Banks,
6. Committee on Allied Health Agencies.

Secondly, re-letter the following subsections from (c) to (d) through (1).

Except as herein amended, said Chapter VII, Section 1, shall remain unchanged.

In Memoriam

Exter, Donald J. Died in Pasadena, September 20, 1958, aged 39. Graduate of the University of Southern California School of Medicine, Los Angeles, 1943. Licensed in California in 1943. Doctor Exter was a member of the Los Angeles County Medical Association.

✣

Ferree, Arthur C. Died in Fullerton, September 4, 1958, aged 40, of heart disease. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1943. Licensed in California in 1947. Doctor Ferree was a member of the Orange County Medical Association.

✣

Lemere, Henry Bassett. Died at Laguna Beach, October 6, 1958, aged 86. Graduate of the University of Nebraska College of Medicine, Omaha, 1898. Licensed in California in 1927. Doctor Lemere was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Merrill, Ralph E. Died in Glendale, September 2, 1958, aged 63, of hepatic failure. Graduate of Harvard Medical School, Boston, Massachusetts, 1920. Licensed in California in 1927. Doctor Merrill was a member of the Los Angeles County Medical Association.

Moffitt, John A. Died in Arcadia, September 24, 1958, aged 62, of carcinoma of the pancreas with metastasis. Graduate of the University of Louisville School of Medicine, Kentucky, 1921. Licensed in California in 1938. Doctor Moffitt was a member of the Los Angeles County Medical Association.

✣

Siegel, Morton T. Died in Covina, September 14, 1958, aged 36, of heart disease. Graduate of Ohio State University College of Medicine, Columbus, 1951. Licensed in California in 1952. Doctor Siegel was a member of the Los Angeles County Medical Association.

✣

Stevenson, Arthur P. Died in Torrance, September 27, 1958, aged 73. Graduate of Ensworth Medical College, St. Joseph, Missouri, 1907. Licensed in California in 1921. Doctor Stevenson was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Thompson, John M. Died October 3, 1958, aged 47, of cancer. Graduate of the University of Cincinnati College of Medicine, Ohio, 1941. Licensed in California in 1947. Doctor Thompson was a member of the Los Angeles County Medical Association.

California Medical Association

1959

Annual Session

SAN FRANCISCO • FEBRUARY 22-25

✶ General Scientific Meetings • Postgraduate Courses
Technical Exhibits • Scientific Exhibits

✶ Medical Motion Pictures

✶ President's Dinner Dance
Tuesday, February 24 • Garden Court, Sheraton-Palace Hotel

✶ House of Delegates
Sunday, February 22 • Wednesday, February 25

✶ Registration Daily
8:30 a.m. to 5:30 p.m. . . . No Registration Fee

PLEASE MAKE HOTEL ROOM RESERVATIONS ONLY THROUGH C.M.A. OFFICE IN SAN FRANCISCO. USE RESERVATION REQUEST FORM ON PAGE 378.

5 POSTGRADUATE COURSES

during

C.M.A. ANNUAL SESSION

February 21 to 24, 1959 • San Francisco

California Medical Association in cooperation with the Medical Schools of STANFORD UNIVERSITY and UNIVERSITY OF CALIFORNIA, *San Francisco, will present five Postgraduate Courses during the Annual Session in February. These Courses, to be held in the Medical Schools, will be clinically oriented and will include case presentations.*

You are invited to select the subject in which you are most interested, follow that Course, and make the 1959 Session the "Postgraduate Session with a Purpose"—time and money well spent.

Look for the program on orange colored paper, giving complete details, which will arrive in your office in January.

• By STANFORD UNIVERSITY SCHOOL OF MEDICINE

1. TREATMENT OF HERNIA—9 hours. Sponsored by the CMA Sections on General Practice and Surgery.

   Time: Sunday, Monday, Tuesday, February 22, 23, 24, 1959—9:00 a.m. to 12:00 noon.

   Place: Stanford University Hospital.

   Fee: $25.00.

2. NEUROLOGY FOR PHYSICIANS—12 hours. Sponsored by C.M.A. Sections on General Practice and Neurology.

   Time: Saturday and Sunday, February 21, 22, 1959—9:00 a.m. to 12:00 noon and 1:00 to 4:00 p.m.

   Place: Stanford University Hospital.

   Fee: $35.00.

3. OPHTHALMOLOGY—4 hours. Sponsored by C.M.A. Section on Ophthalmology.

   Time: Saturday, February 21, 1959—9:00 a.m. to 1:00 p.m.

   Place: Stanford University Hospital.

   Fee: $10.00.

• By UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE

1. FAMILY ENDOCRINOLOGY—9½ hours. Sponsored by C.M.A. Sections on General Practice, Internal Medicine, Pediatrics and Obstetrics and Gynecology.

   Time: Sunday, February 22, 1959—9:00 to 12:30 p.m. and 2:00 to 5:00 p.m.
   Monday, February 23, 1959—9:00 to 12:00 noon.

   Place: University of California Medical Center.

   Fee: $25.00.

2. MEDICINE IN THE JET AND SPACE AGE—7 hours.

   Time: Sunday, February 22, 1959—9:00 a.m. to 12:30 p.m. and 1:30 to 5:00 p.m.

   Place: University of California Medical Center.

   Fee: $15.00.

APPLICATION FOR ENROLLMENT

Mail to: POSTGRADUATE ACTIVITIES, CALIFORNIA MEDICAL ASSOCIATION
2975 Wilshire Boulevard, Los Angeles 5, California

With check or money order in the amount of $____________________made payable to the CALIFORNIA MEDICAL ASSOCIATION.

Name____

Address____

I am in General Practice________________I limit my practice to________________

Medical School attended____________________Year of graduation____________

1. Ophthalmology	Saturday, February 21, 1959	$10.00
2. Neurology for Physicians in Practice	Saturday, Sunday, February 21, 22, 1959	$35.00
3. Treatment of Hernia	Sunday, Monday, Tuesday, February 22, 23, 24, 1959	$25.00
4. Medicine in the Jet and Space Age	Sunday, February 22, 1959	$15.00
5. Family Endocrinology	Sunday, Monday, February 22, 23, 1959	$25.00

APPLICATION FOR HOUSING ACCOMMODATIONS

FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the **California Medical Association,** February 22 to 25, 1959, San Francisco, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. **All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.**

ALL RESERVATIONS MUST BE RECEIVED BEFORE: FEBRUARY 1, 1959

Note: The House of Delegates will convene at the Sheraton-Palace Hotel; all Scientific Sessions and Exhibits will be at the Civic Auditorium.

Eighty-eighth Annual Session

CALIFORNIA MEDICAL ASSOCIATION

San Francisco, California

FEBRUARY 22-25, 1959

HOTEL ROOM RATES *

	Single	Twin Beds	Suites
SHERATON-PALACE (HEADQUARTERS)			
Market at New Montgomery	8.50-16.00	12.50-20.00	20.00-100.00
FAIRMONT			
950 Mason	12.00-20.00	16.00-24.00	37.00- 66.00
MARK HOPKINS			
999 California	14.00-18.00	18.00-22.00	32.00- 60.00
ST. FRANCIS			
Powell at Geary	10.00-22.00	15.00-24.00	26.00- 75.00
SIR FRANCIS DRAKE			
450 Powell	10.00-14.00	15.00-20.00	32.00- 40.00

*The above quoted rates are existing rates but are subject to any change which may be made in the future.

CALIFORNIA MEDICAL ASSOCIATION
450 Sutter Street—Room 2000
San Francisco 8, California

Please reserve the following accommodations for the 88th Annual Session of the California Medical Association, in San Francisco, February 22 to 25, 1959.

Single Room $.................................... Twin Bedded Room $....................................

Small Suite $.................................... Large Suite $.................................... Other Type of Room $....................................

First Choice Hotel.................................... Second Choice Hotel....................................

ARRIVING AT HOTEL (date)....................................Hour:..........A.M..........P.M.

Leaving (date)....................................Hour:..........A.M..........P.M.

Hotel reservations will be held until 6:00 P.M., unless otherwise notified

THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

....

....

....

....

Individual Requesting Reservations—Please print or type Delegate?.......... Alternate?..........

Name.................................... County....................................

Address.................................... City and State....................................

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

RECOMMENDATIONS for the control of staphylococcal infections in hospitals were proposed at a mid-September national conference in Atlanta, Georgia, sponsored by the U. S. Public Health Service and the National Research Council.

The Conference, made up of delegates from 59 professional organizations, recommended:

1. The organization of infection control committees in all hospitals, vested with sufficient authority to investigate infections and to establish and enforce hospital policies. As a necessary supplement, it was also recommended that similar control committees be formed by local medical societies, with representatives from the medical, nursing and housekeeping staffs of all hospitals in the area.
2. Use of an "infection log" in which all infections are classified and pertinent data recorded.
3. A plan for excluding from contact with patients all personnel who have boils or other active staphylococcal lesions or who are known to be carriers of dangerous and epidemic strains.
4. A local plan for establishing criteria on the discriminate use of antibiotics in medical and surgical treatment. Routine use of antibiotics to prevent possible infection in patients was considered highly undesirable.
5. Isolation of infectious patients, particularly those with pulmonary and skin infections, even if this means expanding isolation facilities.
6. Special precautions in the nurseries for the newborn, such as elimination of overcrowding and the maintenance of rigid sanitary standards.
7. Development of intensive and continuous training programs for professional and sub-professional members of hospital staffs.
8. Strengthening of laboratory services and expansion of research.

Conference delegates agreed that the drug-resistant infection is now a problem in practically all hospitals throughout the world. Serious epidemics, although infrequent, have cropped out unexpectedly in many hospitals. Usually starting in surgical wards and in nurseries for newborn infants, the disease is spread throughout the hospital and out into communities by these patients, many of whom show no symptoms until after they leave the hospital.

Fear of causing public alarm which might deter persons from seeking needed hospital care has caused some hospitals to attempt to hide their problem. However, hospital administrators who attended the conference reported a growing awareness that open recognition of the problem will contribute to its control.

Conference recommendations followed closely the control methods adopted earlier this year by representatives of the California Medical Association, the California Hospital Association and the State Health Department.

* * *

Under the leadership of C. Hunter Shelden, M.D., chairman of the Medical Division, an outstanding program was presented for the physicians who attended the Governor's Traffic Safety Council in Sacramento.

Physicians from all over California and from other states participated in the discussions and made recommendations to the Governor regarding medical aspects of traffic accident and injury prevention.

Physicians recommended that:

1. A special licensing program for ambulance drivers be instituted to include examination in the adequate care of the injured, and that basic first aid equipment be carried in all ambulances.
2. Ambulances be required to operate within the normal traffic regulations, including speed limits, in all but exceptional instances, in which case a written report must be made to the law enforcement agency.
3. The administration of tests for alcohol in the blood be further studied.
4. A committee be established to study and possibly revise regulations governing licensing of drivers with a history of attacks of unconsciousness or seizures.
5. Organized medicine and appropriate state agencies cooperate in providing uniform standards for fitness to operate commercial and private vehicles in California.

Highlighting the program this year were a series of presentations on crash injury research, which demonstrated clearly the value of safety features which are now available for new automobiles and which, in some instances, can be incorporated in older models.

* * *

The health effects of air pollution will be discussed at the National Conference on Air Pollution in Washington, D.C., November 18-20. The Conference, a U. S. Public Health Service program authorized by Congress in 1957 has been arranged as part of a five-year program of research and technical assistance to the states on the growing smog problem.

It is hoped the Conference will result in widespread public understanding of the importance and complexity of the smog problem and bring forth a unified ten-year plan of action, setting up specific goals and outlining steps necessary to achieve them, both in research and control activities.

The State Health Department will participate actively in the many group meetings, which will consider the extent of air pollution, sources of air pollution, health effects, economic and social effects and control methods and procedures.

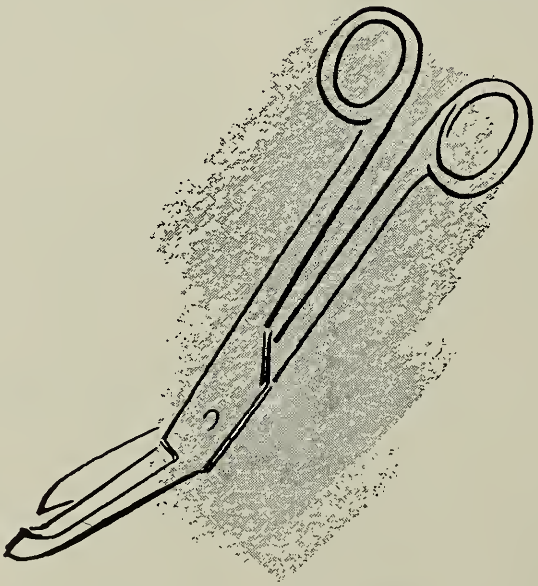
* * *

The reported incidence of paralytic poliomyelitis in California increased somewhat during September, with 40 reported cases as compared with 15 in August and 23 in July. Thirty cases were reported in September last year. However, the total incidence for the current year is still well below previous years.

Total paralytic cases this year number 130, compared with 196 last year, 1,082 in 1956 and 711 in 1955. Of a total of 96 cases for which there are case histories, one-third were in children under five years of age, and another third were in adults over the age of 20. In 72 per cent of the cases in children under five years of age the patients had not received poliomyelitis vaccine before the onset of disease. Eighty-two per cent of the adults over 20 had never been vaccinated.

* * *

The aseptic meningitis syndrome continues to be reported from many areas of the state. Reports from the Viral and Rickettsial Disease Laboratory indicate that many of these cases are of unknown cause. However, mumps, Coxsackie B group, and occasional ECHO type viruses have been found to be associated with a number of these cases. As yet the only outbreak in which a single agent was identified was the Pasadena outbreak earlier this summer in which Coxsackie B5 was found in association with many of the cases.



WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

Meet Your Auxiliary Officers

1958-1959

WE PRESENT TO YOU the second edition in a series of thumbnail sketches and photographs of officers of the Woman's Auxiliary to the California Medical Association.

The district councilors of our 11 districts are important to the coordination of our program. They help to unify the activities of the 34 counties that in turn give strength to the state auxiliary efforts.

To give additional continuity and effectiveness, the president-elect of the state Auxiliary acts as the chairman of district councilors.

* * *

FIRST DISTRICT COUNCILOR. Mrs. Ernest Doud has served in many capacities on the board of the San Diego County Auxiliary. This is her second year as councilor of the First District.

Mrs. Doud

A busy family, two teen-age boys with varied hobbies and interests, adds zest to her life and value to the Auxiliary program.

Dr. Doud, an avid philatelist, keeps the entire family busy drying and sorting stamps while he practices anesthesiology in their home city of San Diego.

* * *

SECOND DISTRICT COUNCILOR. As a past president of the San Bernardino County Auxiliary and chairman of *Today's Health* magazine on the state board last year, Mrs. Frederick Hull is well qualified to work with the counties in District Two.

Mrs. Hull

Daughter Nancy entered Stephens College this fall and son Stephen is in junior high school. Husband "Fred" is an ophthalmologist in San Bernardino.

In addition to her Auxiliary work Mildred devotes a great deal of time to civic and hospital activities.

Mrs. Saffo

THIRD DISTRICT COUNCILOR. A second year councilor, Mrs. Paul L. Saffo is aware of all phases of the Auxiliary and its value to the medical association program, having had a background in the Los Angeles County Auxiliary for a number of years, as well as foreign travel and education.

Efficiency and dispatch are her watchwords and loyalty and friendliness her creed. A teenette daughter, a young five-year-old man-child and husband Paul who is in general practice in Inglewood, enjoy all phases of outdoor living on their Rolling Hills estate.

* * *

FOURTH DISTRICT COUNCILOR. Mrs. Angus C. McDonald, a past chairman of the Southeast District of the Los Angeles County Auxiliary, has held numerous offices on the county board.

Mrs. McDonald

Her experience as head of the speech department of the Huntington High School and her interest in all phases of auxiliary activities make her a real asset as a district councilor.

Two married children and a few "precious" grandchildren keep her and Doctor McDonald (who practices in Highland Park) busy.

* * *

Mrs. Findlay

FIFTH DISTRICT COUNCILOR. Beginning her second year as councilor of the Fifth District, Mrs. Verrill Findlay brings the experience and insight that she has gained from her associations on the state level and as past president of Santa Barbara County to the counties in the Fifth District. A daughter, Nancy, was graduated from Lake Forest College in June. The Findlays have have a lovely home in Santa Barbara, where Dr. Findlay practices urology.

SIXTH DISTRICT COUNCILOR. Service on numerous committees on the state level and as state corresponding secretary in 1954-55 prepared Mrs. Jack Hayes for the extra heavy duties of councilor of the Sixth District. District Number Six consists of 11 county auxiliaries in a wide area. The family hobbies of golf and travel have been interrupted on many occasions by auxiliary duties.

Mrs. Hayes

Dr. "Jack" Hayes is a native son of Bakersfield and in addition to joining Virginia and their son and daughter in their hobbies, he also practices there.

* * *

SEVENTH DISTRICT COUNCILOR. Serving a second year as district councilor of the Seventh District, Mrs. Albert Miller proves that a busy person is the one to whom you give additional duties.

Mrs. Miller

Mother of two sons and a daughter, Mrs. Miller follows the traditional pattern of P.T.A., Girl Scouts, etc. and continues to indulge her musical talents, sharing her time with the San Mateo Auxiliary and with the newly organized San Mateo Auxiliary trio.

Dr. Miller practices in San Mateo and shares in the family hobbies and fun.

* * *

EIGHTH DISTRICT COUNCILOR. A little dynamo named Charlena Custer—"Charlie" to all of us—wife of Dr. Lawrence Custer, is councilor for the Eighth District. A former member of the New York State Board of Education, a member of the Council for Social Planning and during World War II a captain in the Army Nurse Corps, she came to us well prepared to fill the numerous county and state Auxiliary offices that she has filled since making San Francisco her home.

Mrs. Custer

Boating is the latest hobby the Custers are enjoying. Dr. "Larry" Custer is an active county medical association member and practices in San Francisco.

* * *

NINTH DISTRICT COUNCILOR. The Ninth District has been fortunate indeed to have Mrs. Kaho Daily as councilor for a second term. Previously she held many other offices in the Contra Costa County Auxiliary, including that of president. Her good judgment and friendly attitude have endeared her to the district. Three lovely daughters and four beautiful grandchildren keep the Dailys busy, and their home in Pleasant Hills is always a welcome retreat.

Mrs. Daily

Dr. Daily practices in Richmond.

* * *

TENTH DISTRICT COUNCILOR. Mrs. George Jaffrey, an active and consistent officer in the Santa Rosa Auxiliary, was county president in 1956-57 and this year was elected by the Tenth District as councilor. Anne is well equipped with technical skill and with an innate charm that endears her to all of the members in the district. Daughter Martha, 15, and son David, 17, share with Dr. and Mrs. Jaffrey a delightful home in the wooded hills of Santa Rosa, where Dr. Jaffrey is a radiologist.

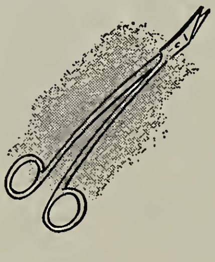
Mrs. Jaffrey

* * *

ELEVENTH DISTRICT COUNCILOR. A charter member of the Yuba-Sutter-Colusa Auxiliary, its first president in 1950-51 and elected for another term in 1953-54, Mrs. William Vasquez has a working knowledge of the aims and purposes of auxiliary activities. It was a natural consequence that she should be elected to represent her district as councilor.

Mrs. Vasquez

Three young boys in addition to civic and cultural activities in Yuba City, where Dr. Vasquez is practicing, keep Rachael extra busy.



NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

Appointment of **Dr. Samuel I. Rapaport** as associate professor of medicine in the University of Southern California School of Medicine was announced recently by Dr. Clayton G. Loosli, dean.

Dr. Rapaport returned to his alma mater from the UCLA medical school, where he has been on the faculty three years. Previously he was on the Southern California medical school faculty seven years in the physiology department. He spent the year 1953-54 as a Fulbright research scholar in hematology at the University of Oslo School of Medicine.

* * *

The eleventh annual **mid-winter radiological conference,** sponsored by the Los Angeles Radiological Society, will be held at the Statler Hotel, Los Angeles, Saturday and Sunday, January 31 and February 1, 1959. The guest speakers will be: Dr. Peter Kerley and Dr. D. W. Smithers, London, England; Dr. F. N. Silverman, Cincinnati, and Dr. A. Finkelstein, Philadelphia.

Further information may be obtained from Dr. Chester P. Bonoff, 1930 Wilshire Boulevard, Los Angeles 57.

SACRAMENTO

The second annual **lecture honoring the volunteer medical staff** of the Sacramento County Board of Supervisors.

Dr. Fred L. Soper will deliver a lecture on "The Role of the World Health Organization in Disease Eradication" at the Kit Carson Junior High School Auditorium on Thursday, December 4, at 8:30 p.m. Dr. Soper is Director of the Pan American Sanitary Bureau, Regional Office of the World Health Organization. He has had long experience in the field of public health beginning in 1920 with the International Health Division of the Rockefeller Foundation working on hookworm, yellow fever, and malaria.

The first lecture was given by Doctor Paul Dudley White in January of this year, and it is the plan of the Board of Supervisors to continue to sponsor an annual lecture in honor of volunteer physicians who contribute much time and effort to the care of the medically indigent of the community.

SAN FRANCISCO

The American College of Allergists graduate instructional course and fifteenth annual congress will be held March 15-March 20, 1959, in the Mark Hopkins Hotel, San Francisco. Further information may be obtained from Dr. John D. Gillaspie, treasurer, 2049 Broadway, Boulder, Colorado.

* * *

Dr. Seymour M. Farber has been named an assistant dean of the University of California School of Medicine, San Francisco. His appointment was announced recently by Dean J. B. deC. M. Saunders.

Postgraduate medical education will be Dr. Farber's area of special responsibility. He has been head of the continuing education program in medicine and the health sciences at the U.C. Medical Center since 1955. He is also associate clinical professor of medicine and chief of the U.C. chest service at San Francisco General Hospital.

* * *

A Postgraduate Course in Diseases of the Chest, sponsored by the American College of Chest Physicians, will be given in San Francisco February 16 through 20, 1959, at the Sir Francis Drake Hotel.

Further information may be obtained from the American College of Chest Physicians, 112 East Chestnut Street, Chicago.

GENERAL

New officers were elected to head the **California Academy of General Practice** when the group held its Tenth Annual Scientific Assembly at the Masonic Temple in San Francisco October 5-8. The meeting was attended by over 2,400 doctors and their wives.

Dr. Carroll B. Andrews of Sonoma was installed as president, succeeding Dr. Antonio J. Franzi of San Francisco. Dr. Leon O. Desimone of Los Angeles was named president-elect.

Other officers elected were Dr. Joseph W. Telford, San Diego, delegate to the American Academy of General Practice; Dr. Horace F. Sharrocks, Sebastopol, alternate. Reelected were Dr. Burt L. Davis, Palo Alto, speaker of the Congress, and Dr. Ralph L. Bennett, Los Angeles, vice-speaker.

* * *

The National Institute of Mental Health is offering grant support for a **training program for general practitioners** and other physicians engaged in the practice of medicine other than psychiatry. Funds are available during the current year (fiscal year 1959) for these grants, and training institutions may submit applications at any time.

The program has two purposes: (1) to foster the development of **postgraduate training in psychiatry** for practitioners who wish to increase their psychiatric knowledge yet continue in their present field, and (2) to provide support at an adequate level for psychiatric residency training for physicians in practice who wish to become psychiatrists.

Grant support for the first purpose is being offered to medical schools, hospitals, clinics and medical and psychiatric societies for the development and expansion of such postgraduate training. Physicians interested in this type of training should apply to one of the institutions which have or are developing such training opportunities.

For the second purpose, training stipends up to $12,000 a year are available, the level of payment to be determined by the training institution, which will also make the award to the individual physician. The National Institute of Mental Health will make awards of grants for this purpose to the training institutions and not to individuals. Physicians seeking support for this kind of training should apply to institutions approved for psychiatric residency training.

Further information about the program may be obtained by communication with Dr. Seymour Vestermark, chief of the training branch of the National Institute of Mental Health, Bethesda 14, Maryland.

POSTGRADUATE

EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Obstetrics and Gynecology. Thursday, Friday and Saturday, November 20, 21 and 22. Eighteen hours. Fee: $50.00.

Current Concepts in Peripheral Vascular Disease. Friday and Saturday, December 5 and 6. Fifteen hours. Fee: $50.00.

Fractures. Friday and Saturday, December 12 and 13. Twelve hours. Fee: $40.00.

Physiological and Clinical Consideration of:

Endocrine System. Wednesday, December 3, 1958. Six hours.‡

Gastrointestinal Tract. Wednesday, December 17, 1958. Six hours.‡

Respiration. Wednesday, January 7, 1959. Six hours.‡

Kidney. Wednesday, January 21, 1959. Six hours.‡

Nervous System. Wednesday, February 4, 1959. Six hours.‡

Advanced Electrocardiography. Mondays, February 9 to March 23. Twelve hours. Fee: $50.00.

Clinical Traineeships — Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

External Diseases of the Eye and Its Adnexa. Wednesday through Saturday, December 3 through December 6. Twenty-three hours. Fee: $65.00.

Disturbances in Gastrointestinal Motility. Sunday through Tuesday, December 7 through 9. Twenty hours. Fee: $40.00.

Advances in Public Health Nursing. Thursday Evenings, January 15 to March 5. Sixteen hours. Fee: $15.00.

Postgraduate Clinics in Dermatology. Friday and Saturday, January 16 and 17. Fourteen hours. Fee: $40.00.

Adolescents (Children's Hospital). Saturday, January 24. Seven hours.*

Pharmacologic Approach to the Study of the Mind. Sunday through Tuesday, January 25 through 27, 1959. Twenty-one hours.*

Course for Physicians in General Practice (Mount Zion Hospital). Monday through Thursday, February 2 through February 5. Twenty-eight hours.*

Advances in Psychiatric Nursing. Thursday evenings, March 12 through April 30. Sixteen hours. Fee: $15.00.

Diagnostic Radiology. Friday through Tuesday, March 20 through March 24.†

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14, 1959. (As a time and money saver, round trip air travel is also possible July 29 to August 10, 1959.)

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Audio-Visual Postgraduate Refresher Courses. Courses are made up of four or more half-hour lectures each, recorded on hi-fi magnetic tape and illustrated by 35-mm. filmstrips or slides in full color, and adapted for use on any standard tape recorder and filmstrip or slide projector, automatic or manual.

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‡Fee: $20.00 each or $80.00 for all five courses.

*Fees to be announced.

†Fees and hours to be announced.

Contact: Paul D. Foster, M.D., chairman, Committee on Audio-Visual Courses, College of Medical Evangelists School of Medicine, 316 North Bailey St., Los Angeles 33.

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Thorax, Abdomen and Pelvis (27 periods, 121 hours), January 7 through April 15, 1959. Tuition: $125.00. **Head and Neck** (14 periods, 63 hours), April 22 through June 3, 1959. Tuition: $75.00.

Surgical Anatomy—Thorax, Abdomen and Pelvis (14 periods, 28 hours), January 7 through April 15, 1959. Tuition: $50.00. **Head and Neck** (12 periods, 24 hours), April 22 through June 3, 1959. Tuition: $35.00.

1959 Alumni Postgraduate Convention. Refresher Courses, March 8 and 9 at 1720 Brooklyn Avenue; Scientific Assembly, March 10, 11 and 12 at Biltmore Hotel. *Contact:* Walter Crawford, executive secretary, 316 North Bailey Street, Los Angeles 33.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE CIRCUIT COURSES

West Coast Circuit in cooperation with College of Medical Evangelists. Santa Maria, November 19; Ojai, November 20.

ANNUAL SESSION POSTGRADUATE COURSES

BY STANFORD UNIVERSITY SCHOOL OF MEDICINE:

Ophthalmology. 4 hours. Saturday, February 21, 9:00 a.m. to 1:00 p.m. at Stanford University School of Medicine (Lane Hall).

Neurology for Physicians. 12 hours. Saturday and Sunday, February 21 and 22, 9:00 a.m. to 12 noon and 1:00 p.m. to 4:00 p.m. at Stanford University Hospital.

Treatment of Hernia. 9 hours. Sunday, Monday and Tuesday, February 22, 23 and 24, 9:00 a.m. to 12 noon at Stanford University Hospital.

BY UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE:

Medicine in the Jet and Space Age. 7 hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 1:30 p.m. to 5:00 p.m. at University of California Medical Center.

Family Endocrinology. 9 hours. Sunday, February 22, 9:00 a.m. to 12 noon and 2:00 p.m. to 5:00 p.m. Monday, February 23, 9:00 to 12 noon at University of California Medical Center.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel Californian, Fresno. Owen Steinbach, M.D., 3004 Fresno St., Fresno.

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25, 26 and 27, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

* * *

Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued on November 1, 1958. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

NOVEMBER MEETINGS

California Board of Medical Examiners—Oral Examination, November 15, San Francisco. Oral and Clinical Examination for Foreign Medical School Graduates, November 16, San Francisco. *Contact:* Louis E. Jones, M.D., 1020 N Street, Sacramento.

Southwestern Pediatric Society Dinner Meeting, University Club, Los Angeles, 6:30 p.m., November 19. *Contact:* Robert Shirley, M.D., secretary-treasurer, 11633 San Vicente Blvd., Los Angeles 49.

Pacific Coast Fertility Society, Annual Meeting, November 20 through November 23, 1958. Hotel El Mirador, Palm Springs, California. *Contact:* Anah C. Wineberg, M.D., secretary, 3120 Webster Street, Oakland 9.

SOUTHERN CALIFORNIA SOCIETY OF GASTROENTEROLOGY Dinner Meeting, November 25, 6:30 p.m. at Los Angeles County Medical Association. *Contact:* S. Melinkoff, M.D., secretary-treasurer, U.C.L.A. Medical Center, Los Angeles 24.

1959 MEETINGS

DEPARTMENTS OF OTOLARYNGOLOGY OF THE COLLEGE OF MEDICAL EVANGELISTS and UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE, jointly present a postgraduate course in "Reconstructive Surgery of the Nasal Septum and External Nasal Pyramid," at White Memorial Hospital, Los Angeles. Sessions start Tuesday evening, January 6, through Friday, January 9, 1959, and will resume Monday, January 12, ending noon Friday, January 16, 1959. *Contact:* Leland House, M.D., 1720 Brooklyn Avenue, Los Angeles 33.

SOUTHERN CALIFORNIA CHAPTER, AMERICAN COLLEGE OF SURGEONS Annual Meeting, January 16 through January 18, Coronado Hotel, Coronado. *Contact:* Max R. Gaspar, M.D., secretary-treasurer, 211 Cherry Avenue, Long Beach 2.

LONG BEACH CANCER AND HEART ASSOCIATION Symposium on Chest Diseases, co-sponsored by Long Beach TB and Health Association, January 21, Lafayette Hotel, Long Beach, 1:30 to 9:30 p.m. *Contact:* L. R. Raymond, executive director, Long Beach Heart Association, 2034 Pacific Avenue, Long Beach.

WESTERN SOCIETY FOR CLINICAL RESEARCH, January 29 through January 31, Carmel. *Contact:* William N. Valentine, M.D., secretary, U.C.L.A. Medical Center, Los Angeles 24.

ALAMEDA-CONTRA COSTA MEDICAL ASSOCIATION and the INSTITUTE FOR METABOLIC RESEARCH Seventh Annual Symposium on Metabolic Problems. All day, February 9 through February 11, 1959. Auditorium, Highland-Alameda County Hospital, Oakland, California. *Contact:* L. W. Kinsell, M.D., director, Institute for Metabolic Research, 2701 14th Avenue, Oakland 6.

AMERICAN COLLEGE OF CHEST PHYSICIANS Fourth Annual Postgraduate Course on Diseases of the Chest, February 16 through February 20, 1959. Sir Francis Drake Hotel, San Francisco, California. *Contact:* Executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

CALIFORNIA MEDICAL ASSOCIATION Annual Meeting, February 22 through February 25, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

AMERICAN COLLEGE OF ALLERGISTS, March 15 through March 20, Mark Hopkins Hotel, San Francisco. *Contact:* John D. Gillaspie, M.D., treasurer, 2049 Broadway, Boulder, Colorado.

AMERICAN ORTHOPSYCHIATRIC ASSOCIATION 36th Annual Meeting, March 30 through April 1, Sheraton-Palace Hotel, San Francisco. *Contact:* Donald Shaskan, M.D., chairman, Arrangements Committee, Veterans Administration, 49 Fourth St., San Francisco 3.

LOS ANGELES COUNTY HEART ASSOCIATION Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., Chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

AMERICAN ACADEMY OF PEDIATRICS Spring Session, April 13 to April 19, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* Charles H. Cutler, M.D., state chairman, Northern California Chapter, 2615 I Street, Sacramento.

AMERICAN COLLEGE OF PHYSICIANS Meeting, Conrad Hilton Hotel, Chicago, April 20-24, 1959. *Contact:* Mr. E. R. Loveland, Executive Secretary, 4200 Pine Street, Philadelphia 4.

CALIFORNIA HEART ASSOCIATION Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION Annual Meeting. June 1 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

SAINT JOHN'S HOSPITAL Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

WESTERN INDUSTRIAL MEDICAL ASSOCIATION Combined Meeting with Nurses, Safety Groups, Hygienists, Third Western Industrial Health Conference, October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

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BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE *are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.*

BAILEY'S TEXTBOOK OF HISTOLOGY—Fourteenth Edition—Revised by Wilfred M. Copenhaver, Ph.D., Editor; Professor of Anatomy, College of Physicians and Surgeons, Columbia University; and Dorothy D. Johnson, Ph.D., Assistant Professor of Anatomy, College of Physicians and Surgeons, Columbia University. The Williams and Wilkins Company, Baltimore, Maryland, 1958. 633 pages, $11.00.

CEREBRAL VASCULAR DISEASES—Transactions of the Second Conference Held under the Auspices of The American Heart Association, Princeton, New Jersey; January 16-18, 1957. Irving S. Wright, Chairman, and Clark H. Millikan, Editor; including a classification and outline of cerebrovascular diseases, a report by an ad hoc committee established by the Advisory Council for the National Institute of Neurological Diseases and Blindness, Public Health Service. Published for The American Heart Association by Grune and Stratton, New York, 1958. 224 pages, $4.00.

CLINICAL ENDOCRINOLOGY—Second Edition—Karl E. Paschkis, M.D., Associate Professor of Medicine, Associate Professor of Physiology, Director of the Division of Endocrine and Cancer Research, Jefferson Medical College; Chief of Endocrine Clinic, Jefferson Medical College Hospital; Attending Endocrinologist, St. Christopher's Hospital for Children, Philadelphia; Abraham E. Rakoff, M.D., Clinical Professor of Obstetric and Gynecologic Endocrinology, Jefferson Medical College; Endocrinologist to the Hospital Laboratories, Jefferson Medical College Hospital; Guest Lecturer in Gynecic Endocrinology, Department of Internal Medicine, Graduate School of Medicine, University of Pennsylvania, Philadelphia; and Abraham Cantarow, M.D., Professor of Biochemistry, Jefferson Medical College; formerly Associate Professor of Medicine, Jefferson Medical College and Assistant Physician, Jefferson Medical College Hospital, Philadelphia. Paul B. Hoeber, Inc., 49 East 33rd Street, New York 16, N. Y., 1958. 941 pages, with 274 illustrations, $18.00.

CLINICAL RADIOLOGY OF ACUTE ABDOMINAL DISORDERS—Bernard S. Epstein, M.D., Chief, Department of Radiology, The Long Island Jewish Hospital, New Hyde Park, New York; Associate Clinical Professor of Radiology, Albert Einstein College of Medicine, Yeshiva University, New York, New York. Lea & Febiger, Washington Square, Philadelphia 6, Pa., 1958. 352 pages, with 406 illustrations, $15.00.

EYE SURGERY—H. B. Stallard, M.B.E., M.A., M.D. (Cantab.), F.R.C.S. (Eng.), Hon. LL.D. (St. Andrews); Surgeon, The Moorfields Eye Hospital; Eye Surgeon, St. Bartholomew's Hospital; Late Pathologist and Curator, The Moorfields Eye Hospital; Eye Surgeon, Radium Institute and Mount Vernon Hospital; Officer of the Order of St. John of Jerusalem; Major, R.A.M.C. (T.A.). Third Edition, Revised, 899 pages, with 671 illustrations, 1958. The Williams & Wilkins Company, Baltimore, Maryland, $18.00.

FAMILY GUIDE TO TEENAGE HEALTH—Edward T. Wilkes, M.D., Associate Clinical Professor of Pediatrics, New York University Medical College; Associate Attending Pediatrist, The University Hospital. The Ronald Press Company, 15 East 26th Street, New York 10, N. Y., 1958. 244 pages, $4.00.

HEAD INJURIES—Mechanisms, Diagnosis and Management—E. S. Gurdjian, M.D., Professor of Neurological Surgery and Chairman of the Department of Neurosurgery, Wayne State University College of Medicine; Department of Neurosurgery, Grace and Detroit Memorial Hospitals; and J. E. Webster, M.D., Associate Professor of Neurological Surgery, Wayne State University College of Medicine; Department of Neurosurgery, Grace and Detroit Memorial Hospitals. Little, Brown & Company, Boston, 1958. 482 pages, $14.00.

HEARING THERAPY FOR CHILDREN—Second, Revised Edition—Alice Streng, Chairman, Department of Exceptional Education, University of Wisconsin, Milwaukee; Waring J. Fitch, Hearing Consultant, Washington State Department of Health; Lecturer, University of Washington; LeRoy D. Hedgecock, Consulting Audiologist, Mayo Clinic; James W. Phillips, Otolaryngologist in Private Practice; Consultant, Washington State Department of Health; Lecturer, University of Washington; and James A. Carrell, Director, Speech and Hearing Clinic, University of Washington. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1958. 353 pages, $6.75.

MANAGEMENT OF EMERGENCIES IN THORACIC SURGERY—John Borrie, M.B.E., Ch.M., F.R.C.S. (Eng.), F.R.A.C.S.; Thoracic Surgeon, Dunedin Hospital and Southern Metropolitan Region, New Zealand; Senior Lecturer in Thoracic Surgery, University of Otago Medical School. Formerly, Hunterian Professor and Jacksonian Prizeman, Royal College of Surgeons, England; Assistant Thoracic Surgeon, Newcastle-upon-Tyne, England; New Zealand Nuffield Surgical Fellow. Foreword by Sir Russell Brock. Appleton-Century-Crofts, Inc., New York, 1958. 340 pages, $10.00.

NEUROLOGICAL BASIS OF BEHAVIOUR — Ciba Foundation—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Little, Brown and Company, Boston, 1958. 400 pages, with 109 illustrations, $9.00.

PATHOLOGY IN SURGERY—James D. Hardy, M.S. (Chem.), M.D., F.A.C.S., Professor and Chairman, Department of Surgery, and Director of Surgical Research, University of Mississippi Medical Center; Surgeon-in-Chief, Hospital of the University of Mississippi; Chief Surgical Consultant Jackson Veterans Hospital and Mississippi Tuberculosis Sanatorium. The Williams & Wilkins Company, Baltimore, Maryland, 1958. 704 pages, $19.00.

PHYSICAL EXAMINATION OF THE SURGICAL PATIENT—J. Englebert Dunphy, M.D., F.A.C.S., Professor of Surgery, Harvard Medical School; Director of 5th Surgical Service and Sears Surgical Laboratory, Boston City Hospital; Consultant in Surgery, Children's Medical Center; and Thomas W. Botsford, M.D., F.A.C.S., Clinical Associate in Surgery, Harvard Medical School; Senior Associate in Surgery, Peter Bent Brigham Hospital; Associate in Surgery, Children's Medical Center. Second Edition. W. B. Saunders Company, Philadelphia, 1958. 375 pages, $8.00.

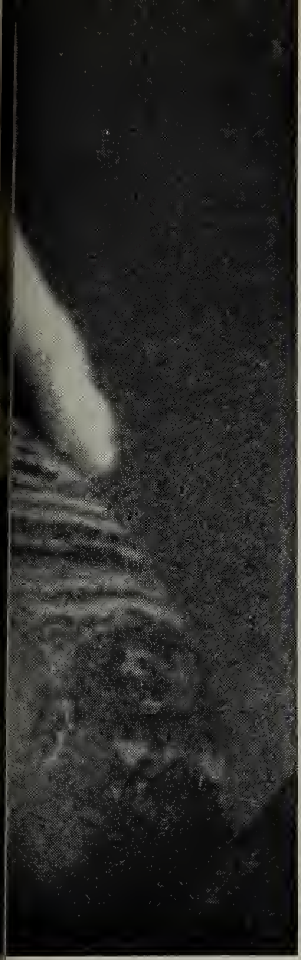
PRINCIPLES AND PRACTICE OF MEDICINE—A Textbook for Students and Doctors—Fourth Edition—Sir Stanley Davidson, B.A. Cantab., M.D., F.R.C.P. Ed., F.R.C.P. Lond., M.D. Oslo; Physician to H.M. the Queen in Scotland; Professor of Medicine and Clinical Medicine, University of Edinburgh; Physician-in-Charge, Royal Infirmary, Edinburgh; and The Staff of the Department of Medicine, University of Edinburgh, and Associated Clinical Units, The Williams & Wilkins Company, Baltimore, Maryland, 1958. 1067 pages, $8.00.

PROGRESS IN RADIATION THERAPY—Edited by Franz Buschke, M.D., Professor of Radiology, University of California School of Medicine, San Francisco, with 13 contributors. Grune & Stratton, Inc., New York, 1958. 284 pages, $9.75.

RADIOACTIVE ISOTOPES IN CLINICAL PRACTICE—Edith H. Quimby, Sc.D., Professor of Radiology (Physics), College of Physicians and Surgeons, Columbia University, New York; Sergei Feitelberg, M.D., Director, Physics Department, The Mount Sinai Hospital; Associate Clinical Professor of Radiology, College of Physicians and Surgeons, Columbia University, New York; and Solomon Silver, M.D., Attending Physician; Chief, Thyroid Clinic, The Mount Sinai Hospital; Associate Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York. Lea & Febiger, Philadelphia, 1958. 451 pages, 97 illustrations, $10.00.

REHABILITATION MEDICINE—A Textbook on Physical Medicine and Rehabilitation—Howard A. Rusk, M.D., Professor and Chairman of the Department of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, New York, N. Y.; and thirty-six collaborators, with the Editorial Assistance of Eugene J. Taylor, A.M. The C. V. Mosby Co., St. Louis, 1958. 572 pages, $12.00.

SEX AND THE ADOLESCENT—Maxine Davis; foreword by J. Roswell Gallagher, M.D. The Dial Press, 461 Fourth Avenue, New York 16, N. Y., 1958. 317 pages, $5.00.



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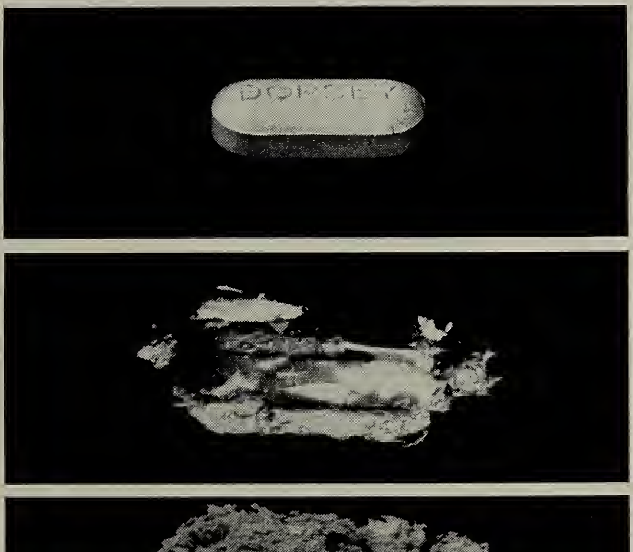

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References: 1. Report of Joint Committee, Medical Research Council & Nuffield Foundation, Treatment of Rheumatoid Arthritis, British Medical Journal (May 29) 1223-1227, 1954. 2. ibid. (April 13) 847-850, 1957. 3. Hart, D.; Bagnall, A. W.; Bunim, J. J., and Polley, F. H.: Ninth International Congress on Rheumatic Diseases, Toronto, Ont. (June 25) 1957. 4. Lewis, L., *et al.*: Ann. Int. Med. *39*:116, 1953. 5. Demartini, F., *et al.*: J.A.M.A. *158*:1505, 1955. 6. Segaloff, A.: Ann. Allergy *12*:565, 1954. 7. Kern, R. A.: Am. J. M. Sc. *233*:430, 1957.

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Tranquilizer Used in Childbirth

Still another use has been made of one of the tranquilizers: To relieve pain and to produce relaxation during childbirth.

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Writing in the August 16 issue of the *Journal of the American Medical Association,* they said excellent results were achieved in 57 of the women and good results in 29.

Promazine has a "marked relaxing effect" and helps prevent vomiting. It also seems to have some properties that help the patient to forget part or all of the labor, the doctors said. They noted that the drug should not be given to persons with asthma, since it produces brief nasal and throat congestion.

The authors are in the department of obstetrics and gynecology, United States Public Health Service Hospital, New Orleans.

There were 99,227 dentists in the United States in 1956, according to the American Dental Association.

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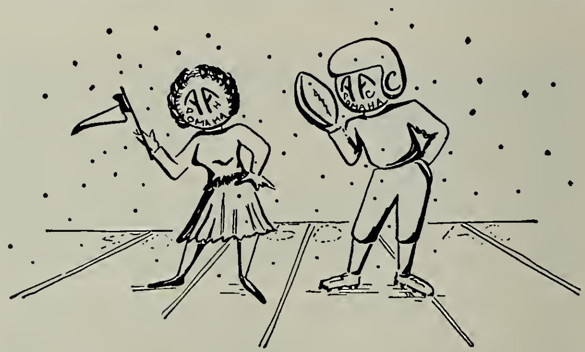

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They based their conclusions on a study of 15,389 women during a three-year period and on their impressions covering a seven-year period. In the smear technique, introduced in 1943 by Dr. G. N. Papanicolaou, material is taken from the cervix and examined microscopically for abnormal cells. It has been recommended that all women undergo a cervical smear test at least once a year and perhaps as often as every six months. One of the major problems with the use of the technique is the lack of persons

(Continued on Page 105)

Note

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pyrilamine maleate	12.5 mg.)
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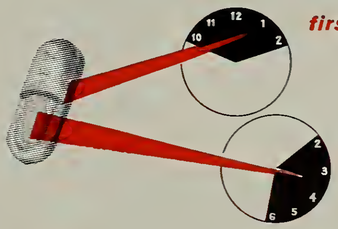

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(Continued on Page 105)

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Study Suggests Possible Cause of Schizophrenia

A new avenue of investigation into possible chemical causes of the mental illness schizophrenia has been suggested by a Harvard Medical School researcher.

Dr. Samuel Bogoch has found that adult schizophrenics have considerably less neuraminic acid—a component of the brain's gray matter—in the spinal cord fluid than do nonschizophrenics.

In fact, the levels of neuraminic acid in the cerebrospinal fluid of adult schizophrenics is "comparable only to values found in some children under seven years of age."

The low values in adult schizophrenic patients may indicate a form of chemical immaturity of the nervous system. This failure in chemical maturity would correlate well with clinical evidence of a failure of psychological maturity in the schizophrenic, he noted.

Writing in the August issue of *Archives of Neurology and Psychiatry,* published by the American Medical Association, Dr. Bogoch said that more studies must be performed before any definite conclusions can be drawn regarding the use of neuraminic acid levels for diagnosing schizophrenia.

Dr. Bogoch stated there have been many attempts to show some chemical cause of schizophrenia through the study of blood and urine, but there has been no definite demonstration of a chemical disorder in the central nervous system proper.

Thus his findings present "an important new area for further investigation," he said. One thing to be learned is the meaning of a lowered value of neuraminic acid in the cerebrospinal fluid.

He studied the neuraminic acid concentrations in the cerebrospinal fluid of 29 adult schizophrenic patients; 72 children under the age of seven years; 29 children between the ages of seven and 15, and 65 non-schizophrenic adults.

He found that low values in adults correlated well with the diagnosis of schizophrenia, whether it be an acute first attack or a chronic process of more than 10 years duration.

The exact function of neuraminic acid in the nervous system is not definitely known, Dr. Bogoch said. It appears to play some role in the functions of the "blood-brain barrier," which helps maintain the special environment of the brain.

He theorized that low neuraminic acid concentrations might affect the functioning of the barrier, which in turn could account for the brain's misfunctioning and the resulting psychotic state.

Furthermore, it may not be necessary to seek specific chemicals as causal agents of schizophrenia, he said. The "causal agents" may be normal substances produced by the body's physical and chemi-

(Continued on Page 96)

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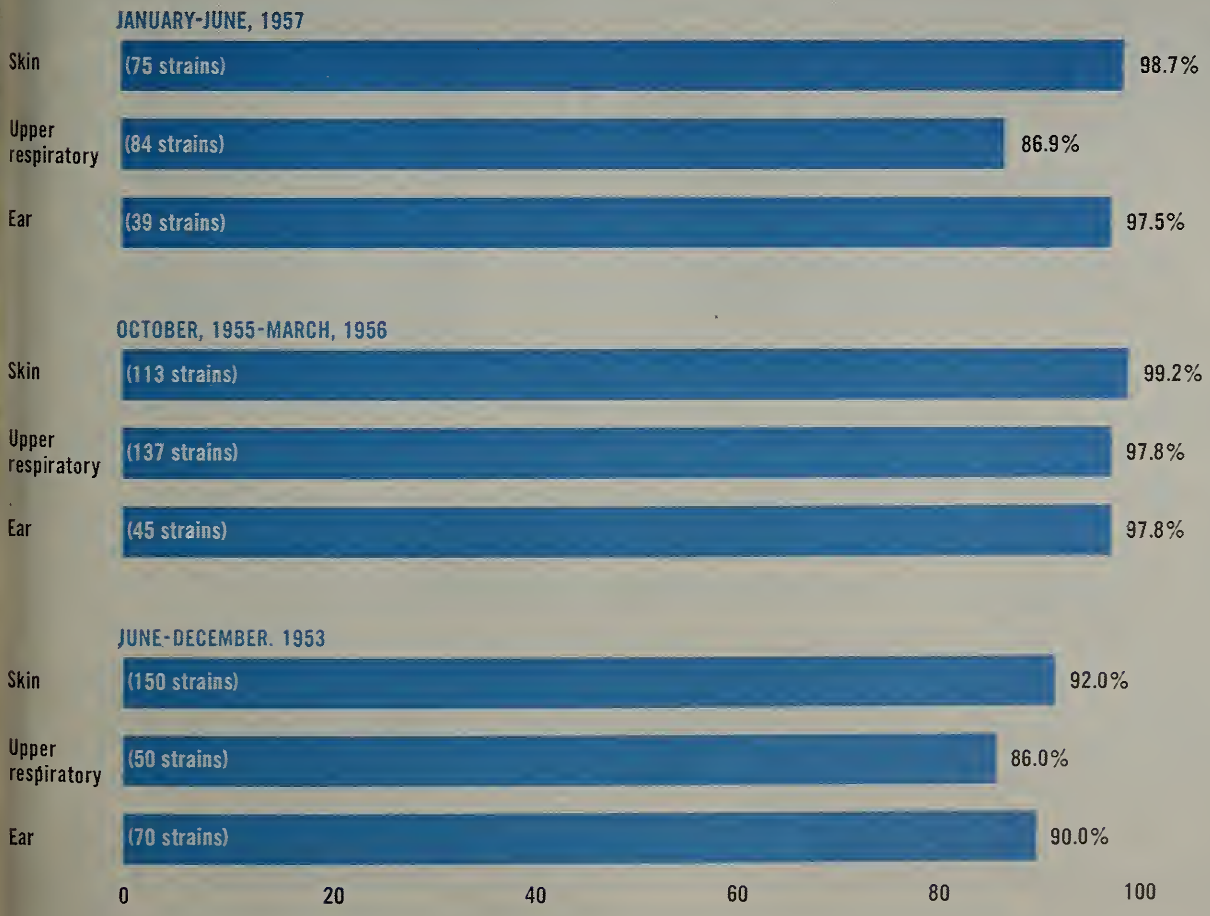

*Adapted from Royer.[1]

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*A Symposium on the Pharmacologic Effects of Dartal on the Liver, Chicago, Searle Research Laboratories, Feb. 7, 1958.

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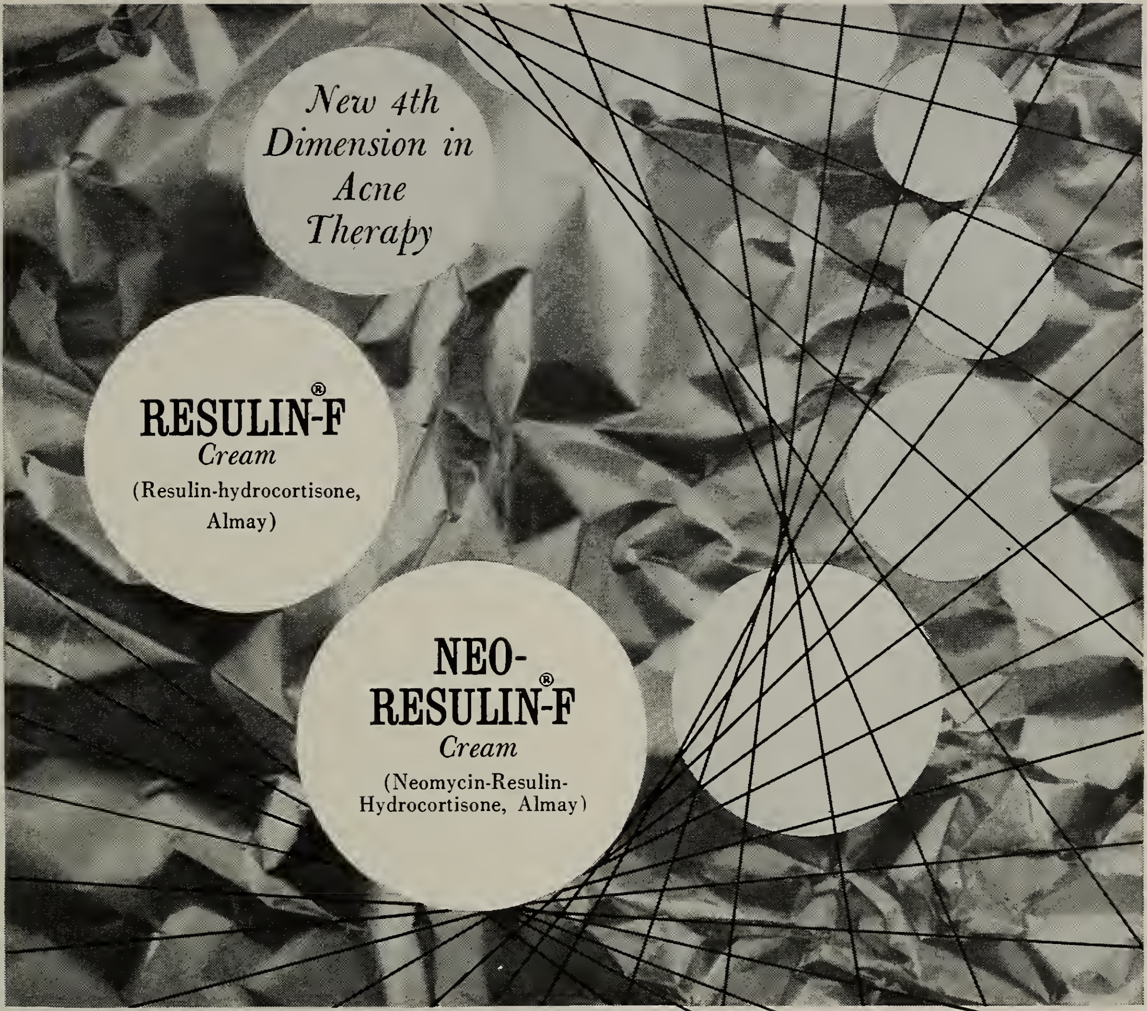
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Supplied: In 15 Gm. tubes.

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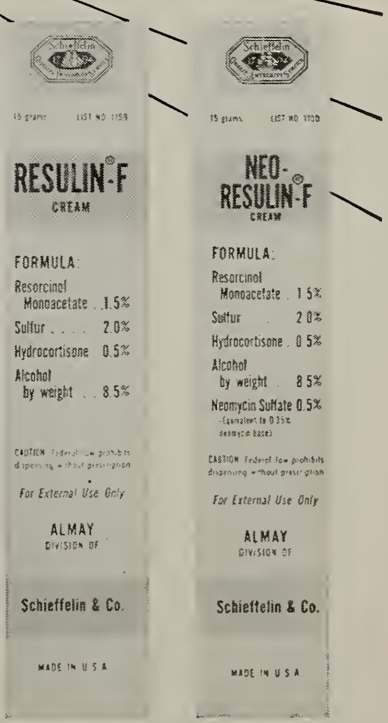
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Infected Animals Can Cause Rabbit Fever

If you skin or clean wild animals, you may be in danger of acquiring rabbit fever.

According to a health column in the October *Today's Health*, published by the American Medical Association, tularemia is one of 83 diseases of animals transmittable to man.

The disease is common in rabbits, field mice, opossums, squirrels, coyotes, skunks, and other small wild animals. It is fatal to the animals.

If an animal seems unusually tame or runs sluggishly when flushed, he may have tularemia, and hunters should be wary of killing and taking the animal home.

The article said that hunters, housewives, and vendors who skin and clean infected animals can acquire the disease through an abrasion or even apparently unbroken skin.

Symptoms in humans include headache, chills, fever, general weakness, backache, joint pains, and prostration.

Antibiotics can cure the disease, but the column listed certain precautionary procedures which include:

—Wearing rubber gloves when skinning animals.

—Washing blood from the skin with plenty of soap and water followed by the use of a disinfectant.

—Calling your physician and going to bed if you think you have tularemia.

Occluded Neck Arteries Cause Many Strokes

A large percentage of strokes are caused by obstructions in the arteries of the neck, according to three Texas physicians. The obstructions, frequently resulting from hardening of the arteries, reduce the flow of blood to the brain, producing the symptoms of stroke—weakness, loss of speech and the ability to understand, visual disturbances, and mental dullness. Other possible causes of stroke are blood clots, capillary hemorrhage, or blood vessel spasm in the brain. Careful diagnosis of the cause of the stroke must be made in order to decide the proper treatment. Occlusions in the neck arteries are readily diagnosed through the use of x-ray. Since the obstructions lie in the neck, they can be treated by "direct surgical attack," according to Drs. E. Stanley Crawford, Michael E. De Bakey, and William S. Fields, Baylor University College of Medicine and the Methodist Hospital, Houston.

Writing in the October 4 issue of the *Journal of the American Medical Association,* they said the surgery may take the form of actual removal of the obstructed part of the artery or the creation of a grafted by-pass around the occlusion. Forty-three patients who had occluded internal carotid, innominate, subclavian or left common carotid arteries have been surgically treated.

Since surgery, signs suggestive of impending stroke have cleared in all patients, and episodes of recurrent strokes which had occurred in 14 patients before operation have not recurred in any patient, the physicians stated.

Leg Blood Movement May Help Prevent Clots

Keeping a patient "walking" during surgery may prevent the formation of death-dealing blood clots, two Canadian surgeons have suggested.

When movement in leg muscles is reduced—as during surgery—the blood pools in the legs and conditions are set for the formation of blood clots. By keeping the patient "walking" through the electrical stimulation of the leg calf muscles, this pooling is reduced. The stimulation causes the muscles to contract as they do in walking and to act as a pump, forcing the blood back to the heart. When clots form, parts of them may break off and move through the vessels, eventually blocking the artery between the heart and lungs. This condition, known as pulmonary embolism, frequently causes death.

Pulmonary embolism is now the commonest single cause of death following major surgical procedures, Drs. John and Angus D. McLachlin said in the October *Archives of Surgery*, published by the American Medical Association.

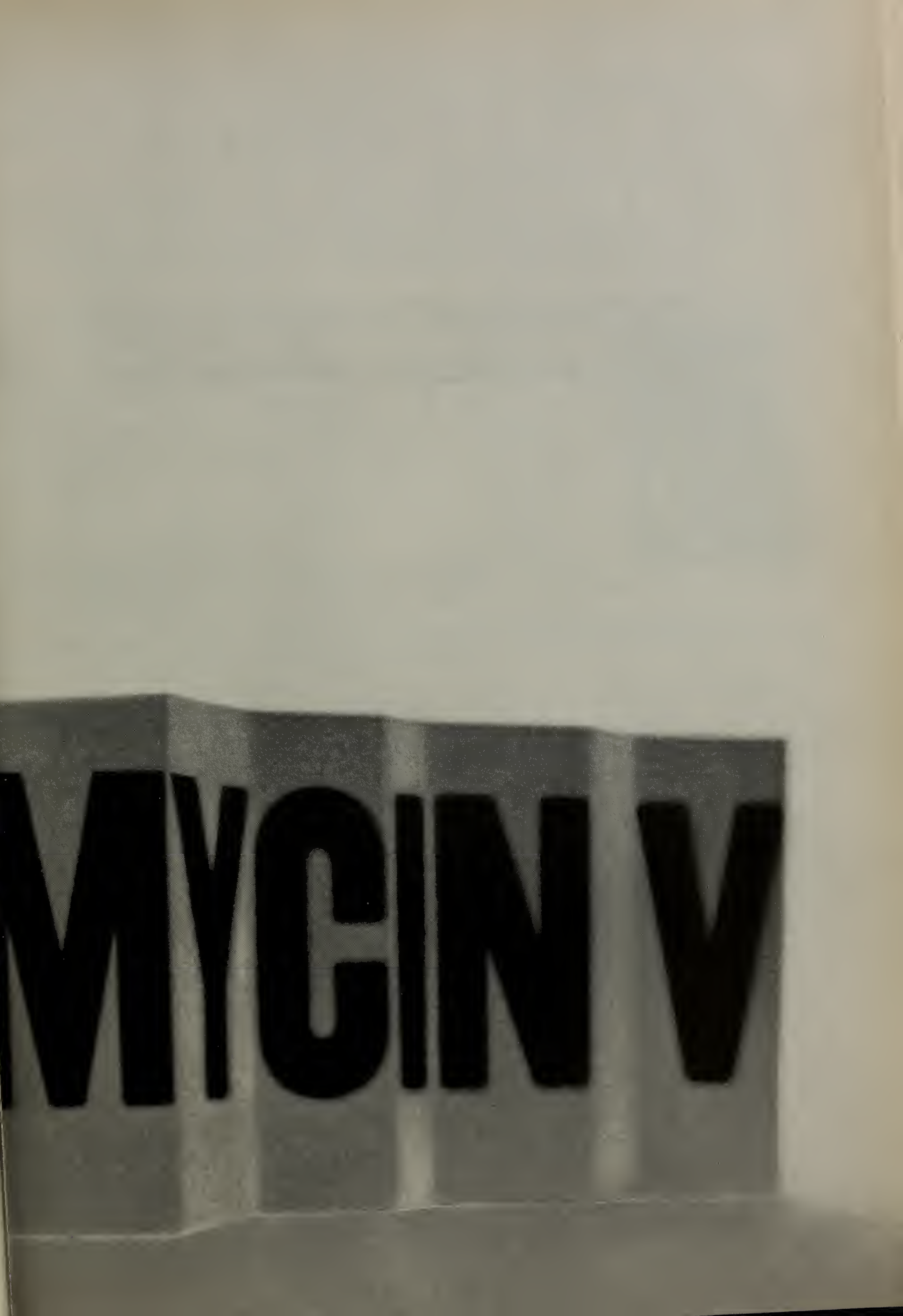
They believe that venous stasis in the legs is the prime factor in pulmonary embolism, although it has not been definitely proved. Prevention of blood pooling would lessen the possibility of clot formation.

The physicians have used skin electrodes similar to those used in the study of the heart's electrical activity. The electrodes are placed on the legs and the closed electrical circuit produces regular contractions of the calf muscles during the operation and until the patient is conscious enough to move about.

"There seems no doubt that blood can be kept moving in the legs in this physiological manner," they said.

Since the role of venous stasis in pulmonary embolism is not definitely proved, "Only time and an adequate number of cases will let us determine whether keeping the 'peripheral venous heart' active during operative procedures will lessen the frequency of pulmonary embolism," the physicians concluded.

The authors are members of the department of surgery at the University of Western Ontario Faculty of Medicine, London, Ont.


MYCIN V

Hypo-Allergenic Cosmetics Meet Beauty, Health Needs

Young women with acne can now wear makeup and not aggravate their skin disorder. They can use some of the special hypo-allergenic cosmetics now on the market.

Foundation creams and lotions are useful camouflages for skin defects, yet standard brands invariably contain oil—the last thing which should be put on an oily skin.

The answer is a foundation without fatty materials, according to Mrs. Veronica Conley, secretary of the American Medical Association's Committee on Cosmetics.

Such a foundation also can contain the common drugs used to treat acne. Because they can be left on the skin day and night, this increases the effectiveness of medications, Mrs. Conley said in the October issue of *Today's Health,* an American Medical Association publication.

Some 50 items including creams, lotions, nail polishes, lipstick, hair preparations, and suntan products are now available in hypo-allergenic form. Attractively packaged and available in a wide selec-

(Continued on Page 32)

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Survey Shows People Want To Choose Own Physician

More than three-fourths of the population of the United States want to choose their own physician. In addition, they want to assume all or part of the responsibility for paying their physician's bills.

These were among the findings in a survey conducted among a sampling of the adult general population by Opinion Research Corporation, Princeton, New Jersey, for the American Medical Association.

The purpose of the study was to explore attitudes about the choice of physicians.

The study also showed that:

—Eighty-eight per cent of the population believe the right to see the same physician is of vital importance.

—Eighty-nine per cent believe that medical care in this country has improved over the past 20 years. Half of these persons ascribe the improvement to more and better research and advances in medical science.

Seventy-six per cent of the people said they wanted to choose their own physicians; 13 per cent saw no difference in whether they or someone else chooses their physician; 8 per cent preferred to have someone else choose, and 3 per cent had no opinion.

In answer to further questioning, 93 per cent of those surveyed felt that free choice would give them more confidence in the physician; 84 per cent thought physician would take a more personal interest in them, and 79 per cent believed they would have less trouble getting the physician to make a home call.

Concerning the right to see the same physician all the time, 88 per cent felt this right to be very important. Of the 12 per cent who did not feel such continuity to be of vital importance, 8 per cent saw no difference in whether or not they saw the same physician every time, and 4 per cent gave other comments.

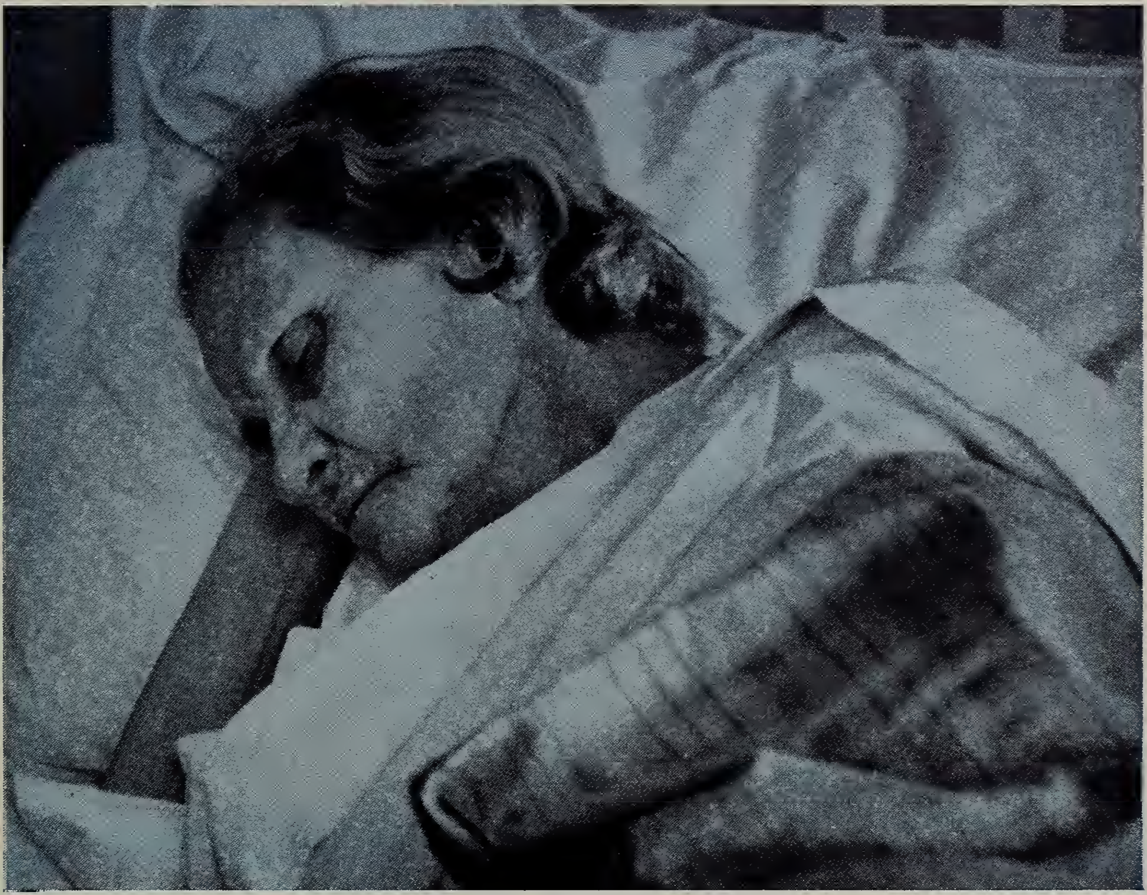
In answering still another set of questions, 93 per cent felt such continuity would give them more confidence in the physician; 92 per cent thought physicians would take a more personal interest in them, and 84 per cent believed they would have less trouble getting a physician to make a house call.

When queried about the main advantages of a regular physician, those interviewed gave a variety of reasons. Sixty-two per cent cited the physician's knowledge of their medical history. They said "He knows your system inside and out from dealing with you regularly; he knows what you've had."

Also mentioned by 30 per cent was reliability on emergency calls; confidence in the physician by 21 per cent, and a closer relationship between physician and patient by 18 per cent.

(Continued on Page 33)

less restricted* night-time sedation



in elderly patients, for instance, nonbarbiturate Doriden provides 4 to 8 hours of sleep without the pre-excitation and later "hangover" often encountered with barbiturates. Doriden is extremely safe. It is especially useful in the many older patients who cannot tolerate barbiturates or who, because of continued use, require such high dosages that respiration may be depressed.

***unlike** barbiturates, Doriden is usually not contraindicated where renal and hepatic disorders are present.

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***unlike** barbiturates traditionally used for sedation, Doriden is metabolized quickly, thus rarely produces "hangover" and "fog."

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Physicians, Medical Societies Urged To Aid State Motor Officials

The physician in charge of special health services for the Public Health Service wants state medical societies and private physicians to lend a hand to motor vehicle directors in finding out why 40,000 Americans are killed by autos each year. Dr. A. L. Chapman told the annual meeting of the Association of State and Territorial Health Officers that while medical scientists have been successfully confining malaria and polio, relatively little has been spent in determining the basic reasons for the high annual highway toll.

"To me this is a challenge which has been inexcusably evaded by the rank and file of the public health and medical professions for several decades. The question now is what are we going to do about it?"

Dr. Chapman suggested: (1) Responsibility for advising state motor vehicle administrators on criteria that can be used to limit driving privileges of those suffering from diseases making them high risk drivers is clearly a medical responsibility. The state health department should bring the medical society and private physicians into the picture.

(2) There is a vast field of study and investigation by medical and paramedical personnel, such as effect of emotions on driving ability, personality pattern of chronic traffic violators and motivations of those who drive in an irresponsible fashion.

(3) Educational programs to get over to the driving public the effects of drugs such as antihistamines on driving ability; the effects of alcohol on reflexes and judgment, and the effect of fatigue on reaction time.

—*A.M.A. Washington Letter*

Hypo-Allergenic Cosmetics Meet Beauty, Health Needs

(Continued from Page 22)

tion of fashionable colors and shades, they compare favorably in price with standard cosmetics.

In their simplest form, hypo-allergenic beauty aids may meet the need of the woman who has a slightly sensitive skin that shows vague symptoms of redness, rash or itching.

In their more complicated form, they may help women who are allergic to some particular ingredient of regular cosmetics. One of the commonest troublemakers is bromo acid dye, used to give lipstick its indelibility. Another is sulfonamide resin, an adhesive ingredient found in all ordinary nail polishes. Hypo-allergenic polishes and lipsticks omit these substances.

For most women cosmetics are no problem, but for the minority with "exceptional skin" hypo-allergenic products are a blessing, Mrs. Conley concluded. They often make possible the use of cosmetics for women who otherwise would have to do without.

The purity, the wholesomeness, the quality of Coca-Cola as refreshment has helped make Coke the best-loved sparkling drink in all the world.
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Unusual Fingernail Condition

Wearing rubber gloves and using a detergent while scrubbing pans may damage the fingernails.

Three cases of hemorrhage under the nails of men who washed pans in a hospital kitchen were reported by Dr. Peter I. Long Jr., Dayton, Ohio.

Writing in the November 1 issue of the *Journal of the American Medical Association*, he said the primary causes of the condition appeared to be injury from scrubbing and a change in the acidity of detergent solution trapped in the gloves.

Prompt recognition of the lesions and elimination of the offending agent is necessary, he said, to prevent extensive nail bed damage.

Further study is needed to determine the exact cause of the condition, since its occurrence could have medical and legal significance if the cosmetic and functional impairment were severe.

In arriving at the cause of the condition, Dr. Long said in his preliminary report that several factors stood out. They are:

—Pan scrubbing entails a lot of hard scouring which would have a tendency to separate the nail from the nail bed, injuring the tissue.

—Only men who wore rubber gloves developed the condition, although they showed no sensitivity to rubber.

—The washing solution that became trapped in the gloves was more acid than that in the sink, possibly because perspiration became mixed with it.

Only men who had worked as pan washers for a short time developed the hemorrhages. The fact that they were not accustomed to the work may be an important factor, Dr. Long said. He does not believe that the hemorrhages resulted simply from injury to the tissue. If injury were the only cause, there would be more cases.

Dr. Long is on the staff at the Dayton Veterans Administration Center.

Survey Shows People Want To Choose Own Physician

(Continued from Page 26)

Concerning the payment of medical bills, a total of 79 per cent wanted to assume all or part of the responsibility for paying their physician bills either by direct payment or by paying part of insurance premiums.

The 79 per cent breaks down into the following: 16 per cent for paying all physician bills directly; 16 per cent for paying all costs of insurance plans, and 47 per cent for paying part of the cost of an insurance plan. The remaining 21 per cent favored someone else's paying the bills.

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† warts; moles; sebaceous cysts; benign tumors; wounds; lacerations; biopsies; tying superficial varicose veins; minor rectal surgery; simple fractures; compound digital injuries (not involving tendons, nerves or bones)

*U.S. PAT. NO. 2,441,498 MADE IN U.S.A.

Civil Aeronautics Board Proposes To Permit Emergency Medical Stops on Airlines

A change in commercial flight regulations to permit airlines to make unscheduled stops in order to provide transportation for persons in need of emergency medical treatment is being proposed by the Civil Aeronautics Board. Present rules prohibit certain carriers from engaging in local air transportation between certain points on their routes, which is known as the "closed door" policy. Civil Aeronautics Board recently heard of a case where a line operating under the policy was prevented from supplying air transportation to a person in need of emergency medical treatment.

Civil Aeronautics Board, in its notice of proposed rule making in the Federal Register, comments: "Under such circumstances, a closed door restriction operates contrary to the public interest, and if requested, would undoubtedly warrant the board's granting relief from such restrictions in each individual case. . . . Accordingly, the board deems it appropriate to exempt by regulation those air carriers operating under a certificate containing a "closed door" restriction from the provisions of such restriction to the extent necessary to permit them to provide local air transportation to persons in need of emergency medical treatment." A physician would have to certify the need.

—*A.M.A. Washington Letter*

Physician Develops New Bandage Scissors

Cutting away a tight bandage has become painless with the development of a new bandage scissors.

Developed by Dr. Preston J. Burnham, a Salt Lake City surgeon, the new scissors slip easily and painlessly beneath tight bandages.

They lack the large acorn-shaped protuberance found on the lower blade of standard bandage scissors, Dr. Burnham said in the October 11 issue of the *Journal of the American Medical Association.*

The lower blade comes to a smooth, rounded point only slightly longer than the upper blade. This allows cutting with the full length of both blades.

The acorn-tipped scissors had to be pushed far under the bandage before cutting could be done, since the acorn tip was blunt. Pushing the scissors between a snugly wrapped bandage and broken bone reminded one, Dr. Burnham said, "of an ancient method of torture in which wedges were pounded beneath wrist gyves to crush the wrists."

The new scissors' short cutting action goes through the toughest dressings without binding, and the point on the lower blade does not catch in the skin or the dressing.

(The scissors are manufactured by J. Sklar Manufacturing Co., 38-04 Woodside Ave., Long Island City, New York.

Coding System Identifies Drugs

A coding system which will aid in the identification of drugs by reference to their physical characteristics is being developed by the American Medical Association.

The identification system relies solely on such characteristics as size, shape, color, scoring, and similar features of tablets and capsules, according to an announcement in the October 20 *AMA News.*

Through its use, physicians, attendants in hospital emergency rooms and poison control centers, law officers, pharmacists, and medical examiners will be able to narrow down a drug's identity to a relatively few products in a short time. Then chemical tests can be made to confirm the identity of the drug.

The new process is the result of several months study of 500 tablets and capsules by John J. Hefferren, Ph.D., of the American Medical Association chemical laboratory.

The project was launched because the chemists have been asked frequently to identify quickly various tablets and capsules, and the only way in many cases was by chemical analysis—often a long-drawn-out process.

Under the new system, an investigator first notes all the physical characteristics of the unknown drug by means of a reference chart. He then consults a long list of tables which are classified as to types of drugs listed. When he finds a given set of characteristics describing the unknown drug, he makes chemical tests which will permit further differentiation and final identification.

In some instances—when letters or designs appear on the drug—immediate identification can be made.

Dr. Hefferren is gathering thousands of drug samples which will be defined, described, measured, and classified.

It is hoped that a text, listing about 5,000 products, can be published in about a year. It will later be expanded to include many more products and be kept up to date by supplements and new editions.

Public Campaign for Polio Vaccinations To Resume This Winter

The Public Health Service has decided to resume the public educational program aimed at getting more people inoculated with the Salk poliomyelitis vaccine. The reason is that the drive of last winter and spring has fallen short of expectations. In the words of Secretary Flemming, "... we have not made nearly the progress we could and should have made during the year—a year in which for the first time there was no shortage of vaccine at any time in any area."

Upshot is that Advertising Council will again carry out a promotion campaign, with the cooperation of the American Medical Association, the National Foundation, state and local health departments and private groups.

Surgeon General Burney of Public Health Service made a report on the 1958 polio season with these highlights:

Of the population under age 40, about 53 per cent has not had the basic three injections, and over a third has had no vaccine at all. There were 1,815 cases of paralytic polio during the first nine months of the year, 258 more than in the same period of 1957.

Cited as a disturbing factor was that in six states (Michigan, New Jersey, Virginia, Texas, West Virginia and *California*) the majority of paralytic cases, 416 out of 781, were among children under five. Of these 416, four out of five had had no vaccine.

There is mounting evidence that incidence of polio is increasing in lower socio-economic groups. Mr. Flemming blames this on apathy, not any "insurmountable financial obstacles." He pointed out funds were available from a number of sources and that the AMA has encouraged state and local societies to organize community clinics and provide vaccinations at minimal cost.

The increase in the number of paralytic cases is no reflection on the efficacy of the vaccine. During the 3½ years of use, effectiveness rate has held at between 60 and 90 per cent. Nor is there any evidence that properly vaccinated persons are losing their immunity.

Both Mr. Flemming and Dr. Burney expressed doubts over the need for any compulsory program of vaccinations for polio.

—*A.M.A. Washington Letter*

Unique electron microscope photographs taken at the University of California Medical School, Los Angeles, show that the individual heart cell functions like a miniature accordion.—*U. C. Clip Sheet, Vol. 34, No. 8.*

G-E molded cassettes cost less—last far longer!

Molded-rubber frame cushions jolts, keeps front and back of cassette in *true alignment.* Built-in glass-fiber pad gently squeezes screens and film for uniform contact always. "Slide-easy" latches release at light finger pressure, resist accidental opening. Molded-rubber seal prevents entry of light. Exclusive rubber hinge — thoroughly proved in ½-million flexings that left it *bonded as firmly as at time of manufacture!*

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Source—Meyer, O. O.: Northwest Med. *53*:1006, 1954.

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dosage: 150-300 mg. (½ or 1 tablet) three or four times daily. *supplied:* NOSTYN tablets, 300 mg., scored. Bottles of 48 and 500.

*Bauer, H. G.; Seegers, W.; Krawzoff, M., and McGavack, T. H.: New York J. Med. *58*:520 (Feb. 15) 1958.

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Capsules / Oral Suspension

designed for effective control of common gram-positive infections

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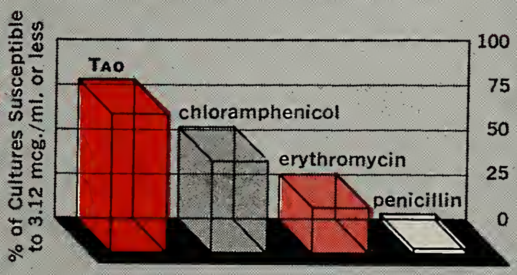
CLINICAL RESULTS	adults	children	all Staph infections
Cured	172 (80%)	148 (89%)	71 (88%)
Improved	28 (13%)	8 (5%)	7 (9%)
Failure	17 (7%)	11 (6%)	3 (3%)

Types of infecting organisms: The majority of identified etiologic microorganisms were Staph. aureus and Staph. albus. TAO has its greatest usefulness against organisms such as: staphylococci (including strains resistant to other antibiotics), streptococci (beta-hemolytic strains, alpha-hemolytic strains and enterococci), pneumococci, gonococci, Hemophilus influenzae.

even against resistant staph[1,2]. . .

Per cent of "antibiotic-resistant" epidemic staphylococci cultures susceptible to TAO, erythromycin, penicillin and chloramphenicol.[1]



well tolerated . . .

REACTIONS:

(a) adults	(b) children
Total—9.2% (20 out of 217)	Total—0.6% (1 out of 167)
Skin rash—1.4% (3 out of 217)	Skin rash—none
Gastrointestinal—7.8% (17 out of 217)	Gastrointestinal—0.6% (1 out of 167)

There was complete freedom from adverse reactions in 94.5% of all patients. Side effects in the other 5.5% were usually mild and seldom required discontinuance of therapy.

plus . . . stability in gastric acid • rapid, high and sustained blood levels • high urinary concentrations • outstanding palatability in a liquid preparation.

Dosage and Administration: Dosage varies according to the severity of the infection. For adults, the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. For children 8 months to 8 years of age, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since TAO is therapeutically stable in gastric acid, it may be administered at any time, without regard to meals.

Supplied: TAO Capsules—250 mg. and 125 mg.; bottles of 60. TAO for Oral Suspension—1.5 Gm.; 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. English, A. R., and Fink, F. C.: Antibiotics & Chemother. (Aug.) 1958. 2. English, A. R., and McBride, T. J.: Antibiotics & Chemother. (Aug.) 1958. 3. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy (Aug.) 1958. 4. Celmer, W. D., et al.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 476.

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*TRADEMARK

Six-Ounce Heart Monitor

A tiny device that can be set on a surgical patient's arm and gives off a "beep" if his heart is functioning normally was recently described.

Cardiac monitors are used to warn surgeons and anesthesiologists when the heart ceases to function properly. If the heart stops, it frequently can be started again through the use of heart massage and electric shock, but these must be done instantaneously.

The new monitor, weighing only six ounces, records the heart's electrical activity, the "most accurate index" of its function, according to Dr. William F. Veling, Detroit, who in the October 11 issue of the *Journal of the American Medical Association* said the miniature monitor has many advantages over the standard larger machines.

A self-contained unit powered by batteries, it needs no long complicated electrical wiring and its audible "beep" overcomes the disadvantage of the older machines which need constant visual attention. "It enlists the attention of the entire operating room team but frees their eyes and hands for other duties," stated Dr. Veling.

Another possible use for the device is that of

(Continued on Page 48)

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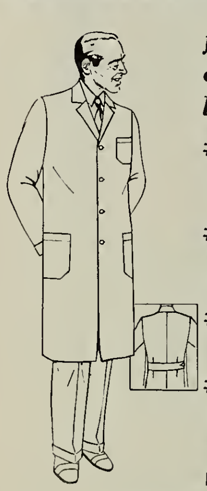

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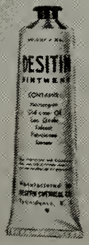

SAMPLES on request **DESITIN CHEMICAL COMPANY**
812 Branch Ave., Providence 4, R. I.

Desitin Ointment contains Norwegian cod liver oil, zinc oxide, talcum, petrolatum, and lanolin.

Six-Ounce Heart Monitor

(Continued from Page 44)

monitoring the hearts of critically ill patients, especially those with heart disease, he said. Because it is small, relatively inexpensive, and easily stored, a hospital could keep a number on hand for use in patients' rooms.

In conclusion, Dr. Veling said, "Small, reliable, rugged and easy to operate and maintain, a miniature cardiac monitor with its reassuring 'beep' could become as commonplace as the stethoscope in the operating room."

Illness Is Not Only Cause Of Sickness Absence

So-called "sickness" absence from work is not necessarily the result of disease or injury.

It may be that the worker is not willing to be there and uses illness as an excuse.

A worker must be both "willing and able" to be on the job. If one of these conditions is not satisfied, he will be absent.

Work absence cannot be eliminated, but it can be cut down. Some of the ways in which this can be done are suggested in a special article in the

(Continued on Page 57)

Twin Pines
NEUROPSYCHIATRIC SANITARIUM
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In-patient services for acute and chronic emotional illnesses.
Electric shock — Insulin shock
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March 6-7—*An advanced clinical course for experienced practitioners*

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October—*On cruise basis*

Fee—$150, including luncheons. *Eligibility*—Restricted to physicians, dentists and psychologists.

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to prevent or relieve POSTOPERATIVE RETENTION OF FLATUS AND FECES

Surgical stress appears to increase the physiologic requirement for pantothenic acid, an important component of Coenzyme A required for acetylation of choline and normal peristalsis. Ilopan safely augments the pantothenic acid level in time of post-surgical need—is well tolerated when given intramuscularly — may be routinely administered by the nurse. Its high solubility permits effective dosage in concentrated form.

HOW SUPPLIED: 2 cc. (500 mg.) ampuls and
10 cc. (250 mg. per cc.) vials

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The Devereux Schools and communities are organized to provide highly individualized curricula for boys and girls from kindergarten through high school.

The children are grouped in a number of self-sufficient residential units, each of which maintains its own homelike atmosphere.

Through this program the children benefit from the individualized attention that the unit staff can give them on a day-to-day basis, while receiving the advantages made possible by Devereux's extensive central professional staff.

Professional inquiries should be addressed to Keith A. Seaton, Registrar, Devereux Schools in California, Santa Barbara, California; eastern residents address Charles J. Fowler, Registrar, Devereux Schools, Devon, Pennsylvania.

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35,000 Physicians Take Graduate Training

More than 35,000 physicians last year took graduate medical training in 1,400 American hospitals, according to the 32nd annual report on graduate medical education prepared by the American Medical Association's Council on Medical Education and Hospitals. The number of medical school graduates taking further training continued to increase in 1957-58.

There were 10,198 graduates serving internships in 1957-58, an increase of 305 over 1956-57, while 24,976 were serving residencies, an increase of 1,964 over the preceding year. The number of hospitals offering training increased from 1,372 to 1,400.

The annual report and an accompanying directory of approved internships and residencies serves two groups of individuals, according to an editorial in the October 4 issue of the *Journal of the American Medical Association,* in which the report appears.

"It is useful to the recent graduate in medicine who is planning his further graduate training program," the editorial said. "It is of equal or greater use to training program directors and medical administrators dealing with broad aspects of graduate training and concerned with program trends and planning for the future."

Of the available internship positions, only 17 per cent remained unfilled. Eighteen per cent of the residency positions were not filled, the report said. Many internship positions are filled by graduates of foreign medical schools.

The report also showed:

—The average number of intern positions for each hospital has increased during the past 10 years from 11.3 to 14.2.

—Rotating internships, which must include training on the medical, surgical, pediatric and obstetric services, accounted for 87.6 per cent of the internships offered. The others were either straight internships in one field or mixed in two or three fields.

—Church and nonprofit incorporated hospitals offered 78.9 per cent of the available internships; federal hospitals, 4.7 per cent; nonfederal governmental, 15.3 per cent, and proprietary (private), 1 per cent.

—The federal hospitals had the highest rate of occupancy, with the Navy and United States Public Health Service hospitals having no vacancies.

—Hospitals in the United States territories and possessions and those in New England showed the highest rate of occupancy—88 per cent. The region having the lowest rate was the East South Central with 75 per cent.

—States with an occupancy rate of 90 per cent or above were New Hampshire, District of Columbia,

(Continued in Back Advertising Section, Page 64)

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2. Most consistently elevated serum levels
3. Safe, physiologic potentiation (with a natural human metabolite)

And now in practice

4. More rapid clinical response
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GLUCOSAMINE-POTENTIATED TETRACYCLINE

CAPSULES
(black and white)
250 mg., 125 mg.
(for pediatric or long-term therapy)

ORAL SUSPENSION
(orange-flavored)
125 mg. per tsp. (5 cc.)
2 oz. bottle

NEW! PEDIATRIC DROPS
(orange-flavored) 5 mg. per drop, calibrated dropper,
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glucosamine-potentiated tetracycline with nystatin

Antibacterial plus added protection against monilial super-infection

CAPSULES (black and pink) 250 mg. Cosa-Tetracyn (with 250,000 u. nystatin)

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glucosamine-potentiated tetracycline-analgesic-antihistamine compound

For relief of symptoms and malaise of the common cold and prevention of secondary complications

CAPSULES (black and orange)—each capsule contains: Cosa-Tetracyn 125 mg.; phenacetin 120 mg.; caffeine 30 mg.; salicylamide 150 mg.; buclizine HCl 15 mg.

REFERENCES: 1. Carlozzi, M.: Antibiotic Med. & Clin. Therapy 5:146 (Feb.) 1958. 2. Welch, H.; Wright, W. W., and Staffa, A. W.: Antibiotic Med. & Clin. Therapy 5:52 (Jan.) 1958. 3. Marlow, A. A., and Bartlett, G. R.: Glucosamine and leukemia, Proc. Soc. Exp. Biol. & Med. 84:41, 1953. 4. Shalowitz, M.: Clin. Rev. 1:25 (April) 1958. 5. Nathan, L. A.: Arch. Pediat. 75:251 (June) 1958. 6. Cornbleet, T.; Chesrow, E., and Barsky, S.: Antibiotic Med. & Clin. Therapy 5:328 (May) 1958. 7. Stone, M. L.; Sedlis, A., Bamford, J., and Bradley, W.: Antibiotic Med. & Clin. Therapy 5:322 (May) 1958. 8. Harris, H.: Clin. Rev. 1:15 (July) 1958.

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BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE *are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.*

BREAST CANCER—The Second Biennial Louisiana Cancer Conference, New Orleans, January 22-23, 1958— Edited by Albert Segaloff, M.D., Director of Endocrine Research, Alton Ochsner Medical Foundation; Associate Professor of Clinical Medicine, Tulane University School of Medicine. Sponsored by the American Cancer Society, Louisiana Division, Inc. The C. V. Mosby Company, St. Louis, 1958. 257 pages, $5.00.

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MEDICAL DEPARTMENT, UNITED STATES ARMY—Cold Injury, Ground Type in World War II— Colonel Tom F. Whayne, MC, USA (Ret.); Professor of Preventive Medicine, School of Medicine, University of Pennsylvania, Philadelphia, Pa., and Michael E. DeBakey, M.D.; Professor of Surgery and Chairman of the Department, Baylor University College of Medicine, Houston Tex.; formerly Colonel, MC., AUS. Prepared under the direction of Major General S. B. Hays, The Surgeon General, United States Army; Editor in Chief Colonel John Boyd Coates, Jr., MC; and Associate Editor Elizabeth M. McFetridge, M.A. Office of the Surgeon General, Department of the Army, Washington, D. C., 1958. U. S. Government Printing Office, Washington 25, D. C. 570 pages, $6.25.

MEN, MOLDS, AND HISTORY—Felix Marti-Ibanez, M.D.; Professor and Director of the Department of the History of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals, New York, N. Y.; Editor-in-Chief of MD Medical Newsmagazine. M.D. Publications, Inc., 30 East 60th Street, New York 22, N. Y., 1958. 114 pages, $3.00.

MYASTHENIA GRAVIS—Kermit E. Osserman, M.D., F.A.C.P.; Physician-in-Charge, Myasthenia Gravis Clinic, The Mount Sinai Hospital, New York; Assistant Attending Physician, The Mount Sinai Hospital. Grune & Stratton, New York, 1958. 286 pages, $10.00.

PEDIATRIC METHODS AND STANDARDS—Department of Pediatrics, School of Medicine, University of Pennsylvania. Editor, Fred H. Harvie, M.D., Associate Professor of Clinical Pediatrics. Third Edition. Lea & Febiger, Philadelphia, 1958. 324 pages, $4.50.

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SCHIZOPHRENIA—Manfred Sakel, M.D. Foreword by Prof. Hans Hoff, Head, Department of Neurology & Psychiatry, University of Vienna. Philosophical Library, New York, 1958. 335 pages, $5.00.

SO YOU HAVE GLAUCOMA—Everett R. Veirs, M.D., Chief of the Section of Ophthalmology for the Scott and White Clinic, Scott and White Memorial Hospitals, and Scott, Sherwood and Brindley Foundation, Temple, Texas; and a lecturer in Ophthalmology at The University of Texas Postgraduate School of Medicine, Temple Division. Grune & Stratton, New York, 1958. 64 pages, $2.75.

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THERAPEUTIC EXERCISE—Edited by Sidney Licht, M.D., Honorary Member, British Association of Physical Medicine, Danish Society of Physical Medicine, and the French National Society of Physical Medicine. Elizabeth Licht, publisher, 360 Fountain Street, New Haven, Conn., 1958. 893 pages, $16.

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WATER AND ELECTROLYTE METABOLISM IN RELATION TO AGE AND SEX—Ciba Foundation Colloquia on Aging—Volume 4—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Maeve O'Connor, B.A., Editors for the Ciba Foundation. Little, Brown and Company, Boston, 1958. 327 pages, with 85 illustrations, $8.50.

Illness Is Not Only Cause Of Sickness Absence

(Continued from Page 48)

October 25 issue of the *Journal of the American Medical Association.*

The first step is to understand the real reasons for absence; there are some 14 factors which are related to or influence it.

The first two are physical and emotional health, the only two that are strictly within the realm of the physician. Yet industrial and family physicians must understand and deal with the others.

Among them are the worker's adjustment to his job as it is influenced by a number of factors, including his education and training and his assignment to the proper job.

Others include the worker's reactions to his supervisor, his associates on the job, his family and friends. The physical environment of the work and the economic aspects of the job also affect the worker's presence or absence.

One study showed that only 35 per cent of persons with more than four absences in a six-month period felt they had enough responsibility, while 65 per cent of those with only one absence felt they had enough.

This illustrates the correlation between employee attitudes about their jobs and their attendance on the job, the article said. This kind of relationship also holds true for other factors such as whether the worker feels free to discuss personal problems with his supervisor; feels that he is a member of the group; feels that the company is using his skills to his best advantage, and feels that he has a chance of promotion.

"One step toward understanding, predicting, and coping with absence lies in discovering such associations," the article noted.

A program of counseling and preventive medicine must be set up by the industrial medical service.

Actually the function of the medical department is a dual one, the article said. It must work toward obtaining a low "illness rate" for organic and serious mental illness, and it must help management reduce the "absence rate" that is due to reasons other than organic illness.

Probably 90 per cent of time lost is on account of non-occupational disease and injury, which is treated by a family physician. Therefore, the family physician must understand the elements of work absence and establish a close working relationship with industrial physicians.

The article, prepared by the Committee on Medical Care of the Industrial Worker of the American Medical Association Councils on Industrial Health and Medical Service, is a compilation of quotations from various sources on different aspects of the work absence problem.

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(Continued in Back Advertising Section, Page 82)

California MEDICINE

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The Spirochete and Multiple Sclerosis

HENRY W. NEWMAN, *M.D.*, CAROLA PURDY, *M.D.*,
LOWELL RANTZ, *M.D.*, and F.C. HILL, JR., *M.D.*, San Francisco

• Cultures on anaerobic medium were made of the spinal fluids of 27 patients with multiple sclerosis and 13 controls after the method described recently by Ichelson. Where Ichelson found organisms resembling spirochetes in 78 per cent of patients with multiple sclerosis, we found some form of what appeared to be a living micro-organism in 18.5 per cent. The control fluids were all sterile. The work requires confirmation and amplification.

In spite of the concerted efforts of many researchers in the field of multiple sclerosis, the cause of this common neurological disease remains obscure. Among the great variety of agents suspected at one time or another of being the causative factor, a living organism bearing a resemblance to a spirochete has been implicated by a number of workers. In 1921 Speer[3] made a darkfield preparation by wiping the surface of a plaque from fresh autopsy material with a sterile loop and saw motile spiral organisms. A few years later Schroeder[2] reported finding black spiral fibrils, stained by the silver method of Levaditi, in lesions of two patients dying of the disease; he was unable, however, to find any spirochetes in another patient with multiple sclerosis nor in ten controls free of the disease, and noted that, in the absence of culture and transmission, Koch's postulates were not fulfilled. Steiner[4] maintained his enthusiasm for the spirochete as the cause of multiple sclerosis longer than most investigators, but no convincing demonstration of production of nervous system disease by the organisms said to have been isolated from human lesions was ever presented.

After a considerable period in which interest in this field had lagged, Ichelson[1] in 1957 reported striking results in the culture of a spirochete-like organism in an anaerobic medium. These organisms grew on cultures of spinal fluid in 78 per cent of 76 cases of patients with multiple sclerosis; they did not grow on cultures of spinal fluid from 28 persons who did not have the disease. The illustration of the organism in that report, a silver stained specimen, showed rather tightly coiled spirals looking much like the spirochete of syphilis. The organisms previously described by other workers, as observed in fresh preparations, had shown a variety of forms, some spiral, others more like spermatozoa or a tennis racket. Ichelson's most interesting report encouraged us to try to repeat the work, following as closely as possible the details of procedure as set down in the communication.

METHOD

The medium was prepared exactly as described by Ichelson,[1] the same brand of materials being used where brands were specified. Difficulty was encountered in filtering the medium through a Selas filter, which became plugged after approximately 30 cc.

From the Division of Neurology and the Laboratory of Bacteriology, Department of Medicine, Stanford University School of Medicine, San Francisco, California.

Presented before the Section on Neurology and Psychiatry at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

was passed. Since filtering the medium through filter paper before Selas filtering was attempted did not obviate this difficulty, a Seitz filter was substituted for the Selas filter, with satisfactory results.

Sterility tests of the medium were made in thioglycollate broth and blood plates, aerobically and anaerobically, at room temperature, at 30°C and at 37°C. The human serum was drawn on the day of preparation of the medium. The rabbit serum for the first 20 specimens had been stored in deep freeze; that used subsequently was obtained on the day of preparation of the medium. The medium was stored at room temperature. It was not renewed at regular intervals for the inoculation of the first half of the series of spinal fluids. When it was recognized that possibly anaerobic conditions were not maintained over a prolonged period, fresh medium was prepared at least every three weeks.

Specimens for phase microscope examination were obtained at weekly intervals by inserting a capillary pipette through the vaseline-paraffin oil layer at the top of the culture tubes to the bottom of the tube and withdrawing 0.3 cc. of culture medium. A drop of this fluid was placed on a slide and polystyrene latex beads, diameter 0.814 micron, were added for the adjustment of the fluid level under the phase microscope. A cover-slip was placed on top of this preparation and examination under oil immersion (magnification ×1280) was carried out.

Blanks, consisting of saline solution inoculated into the culture medium, were similarly prepared and examined.

Positive cultures were transferred to fresh culture media by withdrawing 0.5 cc. of culture medium from the bottom of positive culture tubes with a capillary pipette.

Between September 1957 and June 1958, 42 specimens of spinal fluid were collected under sterile conditions from 40 patients, thirteen of whom were controls known not to have multiple sclerosis, and 27 patients with a secure diagnosis of multiple sclerosis. From one patient in each group two specimens were taken at about a month apart. The fluid was added to the culture medium within two to three hours of being drawn, except in one instance in which the fluid was allowed to stand overnight. The bacteriologist was unaware of whether the fluid was from a patient who had multiple sclerosis or from a control until after the study was completed.

RESULTS

Of the 42 spinal fluid specimens tested, six contained organisms. All the positive specimens were from patients with well documented multiple sclerosis. Both specimens from the patient who was twice tested were positive. None of the controls and none of the blanks contained these forms. Various forms of motile micro-organisms were observed. In length they varied from 3 to 10 micra and in width from 0.7 to 0.9 micra. A few organisms looked like a curved rod with two flagellae, while others were short and plump. No spirals were seen in this fresh material, but the appearance was not unlike that described in the early reports. As described by Ichelson, they seemed to "dive into the fluid," and their progress across the field was quite different from the Brownian movement of the polystyrene beads. The organisms appeared in the medium in from four to twenty-four days, and they were never numerous, two to three being the average number found in a single preparation. After three to five weeks all positive cultures showed non-motile debris similar in shape to the motile forms previously seen; such debris was never seen in negative cultures whether from persons with the disease or from controls. The gross appearance of the positive cultures was clear, and they could not be distinguished from the controls on this basis. All the positive cultures could be transferred once to new culture medium, but not further; thus it cannot be stated definitely that multiplication occurred in the sub-culture, as the organisms in the second culture might have been only those surviving from the original culture.

TABLE 1.—*Clinical Data on Patients with Multiple Sclerosis with "Positive" Cultures*

Sex	Age at Onset	Time Since Onset	Spinal Fluid Protein Mg. per 100 cc.	Colloidal Gold Test Reaction
Male	33	30 years	58	5444321000
Female	33	4 years	44	5544321000
Male	42	7 years	64	5554321000
Female	20	3 weeks	22	1111100000
Male	30	3 weeks	84	0012221000
		7 weeks	42	0112221100

Table 1 shows some features of the cases in which there were positive cultures, five in number with two specimens of spinal fluid from the fifth case. It will be noted that in three of the patients the disease was of considerable duration; and these three had a first zone reaction to the colloidal gold test. In two quite recent cases the colloidal gold test curves were flatter. In general, it may be stated that there was no consistent difference clinically between cases in which cultures were positive and those in which they were negative, yet in all the "positive" cases the disease was either quite acute or the spinal fluid findings were of an acute nature.

CONCLUSIONS

In an appreciable proportion of our small series of multiple sclerosis patients (5 of 27, or 18.5 per cent) some form of what seemd to be a living organism was grown on an anaerobic medium as described by Ichelson,[1] while no such organisms were found in a series of patients without the disease. This is a much smaller percentage than reported by Ichelson, but not out of line with data in point reported by earlier investigators, as summarized by Steiner.[5] All the patients with "positive" cultures were either in an acute early phase of the disease or had a colloidal gold test curve in the first zone. The exact nature of the organisms, if such they be, remains unknown and further study of their cultural and staining characteristics, as well as the trial of inoculation into experimental animals to try to reproduce the disease, seems urgently indicated. It is hoped that our incomplete but possibly significant findings will stimulate further work on this almost forgotten aspect of the etiology of multiple sclerosis.

Stanford University Hospital, San Francisco 15 (Newman).

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Postmastectomy Lymphedema

JOHN R. RYDELL, *M.D.*, W. KENNETH JENNINGS, *M.D.*, and ERNEST T. SMITH, *M.D.*, Santa Barbara

• Disturbing lymphedema of the related arm occurs in 20 to 30 per cent of patients after conventional mastectomy.

Infection, obesity and radiation therapy are the most important contributing factors in the development of swollen arm.

Continuous suction drainage of the wound and the use of antibiotics will reduce the incidence of infection.

Lymphangiosarcoma is a rare fatal complication of postmastectomy lymphedema.

THE MOST COMMON COMPLICATION of conventional mastectomy is swollen arm. Halsted,[2] whose technique for radical mastectomy is still the one most widely employed, was the first to emphasize the importance of this problem and to publish his views concerning the cause. Although it may be anticipated that one of every four women operated upon for mammary cancer will have a definite and permanent swelling of the arm, there has been comparatively little written concerning the cause or the management of this condition.

Holman[3] and associates reviewed 100 cases of radical mastectomy in the clinic at which they worked and reported their results in 1944. Seventy per cent of the patients had definite enlargement of the arm and in 11 per cent the circumference of the mid-portion of the affected arm had increased by more than 6 centimeters. Lobb and Harkins[4] studied a large group of women operated upon by members of one surgical service and found definite swelling in 80 per cent of them. An increase in the circumference of the upper arm of more than 3 centimeters was noted in 22 per cent. More recently (1951) Macdonald and Osman[5] reviewed 140 consecutive cases and reported measurable swelling in 72 per cent while 24 per cent had a disparity of more than 2 centimeters between the two arms.

To determine the incidence of lymphedema in our own experience we examined the records of consecutive patients over a five-year period. We classified the patients into three groups: Those without any demonstrable swelling, those with subclinical swelling, and those with clinical edema (Table 1). The subclinical group included patients whose upper arm measurements indicated an increase in circumference of from 1 to 2 centimeters. Whereas all measurements in Macdonald's study were made 10 cm. below the acromion process, we accepted measurement at the approximate midportion of the upper arm as sufficiently accurate to serve the purpose of this study. Many of the women were unaware of the swelling and those who had observed the slight enlargement were in no way disturbed by it. In the clinical swelling group all patients were aware of disparity in the size of the two arms and most complained of the unsightliness or of the difficulty in passing the enlarged arm through a sleeve. A number were conscious of a sense of heaviness in the arm but only one complained of actual pain. The upper arm measurement in this group indicated an increase in circumference of more than 2 centimeters in all patients.

It was apparent that our observations closely paralleled those reported by investigators in the recent literature. Haagensen[1] decried this high rate of lymphedema following mastectomy and said that in cases in which he personally supervised the postoperative care of such patients, the incidence of swelling was very low. However, a careful analysis of his records suggests that he referred primarily to cases of pronounced disabling edema, which is of relatively low incidence in all the series reported. In our series, although edema of some degree was present in a high proportion of cases it was of clinical degree in only 30 per cent.

ETIOLOGY

As to the cause of the swelling of the arm, most authorities agree with Halsted's[2] original postulate that wound infection is the dominant factor in the early postoperative swelling. Marginal wound necrosis and the subdermal pooling of serum which is so

TABLE 1.—*Incidence of Postmastectomy Lymphedema (Review of 64 Cases at Cottage Hospital)*

	No. Cases	Per Cent
No edema	27	42
Subclinical* (1-2 cm.)	18	28
Clinical† (2+ cm.)	19	30
Total cases	64	100

*Arm circumference 1 to 2 cm. greater than other arm.
†Circumference more than 2 cm. greater than other arm.

Submitted May 23, 1958.
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common in these cases predisposes to infection. Delayed edema is undoubtedly the result of occult lymphangitis in an arm in which lymph drainage is already severely handicapped. The following is a case in point.

Case 1. A woman 54 years of age underwent right radical mastectomy in 1949. Two of the seven nodes examined were positive for metastasis. A number of enlarged tortuous veins of varicose type were present instead of an axillary vein. About six months later edema of the right arm first became visible, although there were no signs of infection about the hand or arm. The swelling gradually increased over the next two years, until the circumference of the right arm was 8 cm. greater than the left.

Postoperative radiation therapy is considered by many investigators to be a contributing cause of lymphedema. In our series a higher incidence of edema was noted in the irradiated group (Table 2). However, in two cases in which degree of swelling was greatest, no roentgen therapy had been given.

It has been suggested that the incidence of edema is related to the number of axillary lymph nodes removed in radical dissection, but this was not confirmed in our own study; and in animal experiments such an association does not occur when the lymphatics are severed over a wide area. It has been established that ligation of the axillary vein has no influence on swelling. Macdonald said that he routinely resects this vein to provide a more adequate removal of the regional lymphatics and has observed no additional predisposition to swelling in the arm. There appears to be universal agreement among surgeons that obesity is an important contributing factor because of the increased susceptibility to infection. In our series there were 12 patients who had an increase of more than 5 centimeters in circumference of the arm, and eight of the 12 were obese.

TREATMENT

The treatment of postmastectomy edema should be aimed at prevention. There is abundant evidence to indicate that infection, primary and secondary, is the foremost cause of the swollen arm. The surgeon should be careful to avoid the collection of serum in the axilla and beneath the skin flaps, for such pooling invites infection. The time-honored compression dressing and intermittent needle aspirations (when indicated) will usually serve this purpose. In recent years the use of continuous suction drainage of the wound has gained increasing popularity. We have used it for four to seven days in the last 25 consecutive cases and believe that it will result in a lower incidence of lymphedema. Of the 25 women so treated, seven were obese and five of them had clinical edema; but only one of the 18 who were not obese had edema.

TABLE 2.—*Correlation of Various Etiologic Factors with Edema in 64 Cases of Postmastectomy Lymphedema*

		Edema		
		Subclinical or None	Clinical Edema	
Etiologic Factors	No. of Cases	No. of Cases	No. of Cases	Per Cent
Delayed healing	17	12	5	29
Radiation therapy	40	25	15	37
Axillary node involvement	35	21	14	40
Obesity	14	6	8	58

Macdonald and Smith abandoned the use of dressings in the belief that the exposed dry wound is less vulnerable to infection than one swathed in cotton and gauze.

Necrotic tissue appearing in the margins of the sutured cutaneous flaps should be carefully excised. Halsted[2] recommended an "open wound" with secondary skin grafting to avoid the marginal necrosis which frequently resulted from undue tension on the sutured flaps. Holman[3] found no reduction in the incidence of edema in 71 cases in which grafting was done, and concluded that "primary skin grafting has no influence on the occurrence of swelling of the arm following radical mastectomy." Many surgeons advise the use of antibiotics at the first indication of infection or sign of swelling. Since 25 per cent of women undergoing conventional mastectomy for cancer may expect an objectionable degree of swelling in the arm, it would seem logical to use antibiotics prophylactically for the first few days. Delayed infection should likewise be treated vigorously with antibiotics, with foments for lymphangitis and elevation of the arm.

Most authorities reserve radiation therapy for patients with axillary metastasis. This undoubtedly explains the parallel between the incidence of arm swelling and axillary node involvement in the one instance and irradiation therapy in the other. A relationship of roentgen therapy to lymphedema is best explained as owing to radiodermatitis with secondary infection. The increasing use of methods of radiotherapy that cause minimal skin damage should greatly lessen this hazard.

Lymphedema of long standing is highly resistant to treatment. Numerous methods have been proposed for relief of the condition but all have been discarded, among them the Kondolean operation, the insertion of celloidin strips or laminated gelfoam into the subcutaneous tissues and the use of elastic bandages during the early postoperative weeks. We have had some encouragement in the use of Habif's method for alleviating swelling of long standing. The patient is put in hospital for five days and each day 50 cc. of a mixture of one ampoule hyaluronidase in normal saline solution is injected into the subcutaneous stratum of the entire arm, 5 cc. of the solution being introduced at each of ten sites 5 cm.

apart. The entire arm is then incorporated in a compression dressing and elevated for three hours. At the discretion of the physician the treatment is repeated in one to two months. All obese patients should be encouraged to reduce their body weight before beginning the treatment.

Should the present-day controversy between physicians who favor simple mastectomy plus radiation therapy for mammary carcinoma and those who favor radical operation be decided in favor of the former group, there undoubtedly would follow a sharp decline in the incidence of postmastectomy swollen arm. While two of fifteen patients who recently underwent simple mastectomy had mild edema in the arm afterward, in neither could it be classified as clinical. In one case persistent lymphedema developed following a breast biopsy in the upper outer quadrant.

DISCUSSION

Swollen arm continues to be one of the most disturbing problems associated with the treatment of mammary cancer. Often a woman cured of cancer is unhappy about the unsightliness of a permanently enlarged arm. A number of questions concerning postmastectomy lymphedema remain unanswered. One may build an excellent case for infection as the cause of swelling—and then observe a patient with extensive infection and delay in healing who recovers with no demonstrable enlargement of the arm. The same may be said for radiation therapy. While we are of the firm conviction that obesity tends to promote the development of edema, we can recall one most obese patient who had extensive marginal necrosis with secondary infection and in whom the wound was six months in healing but who one year later showed no significant enlargement of the related extremity.

The appearance in the recent literature of an increasing number of reports of lymphangiosarcoma developing in the lymphedematous arm following radical mastectomy deserves special mention. Stewart and Treves[6] first called attention to this tumor in 1948. They described six cases they had observed and collected reports of ten others from the literature. To date some thirty cases have been reported. Characteristically the lesion makes its appearance in a swollen arm a number of years after the operation. The shortest interval between mastectomy and the onset of lymphangiosarcoma in any of the published cases to date was six years. Typically the initial lesion is a mildly tender cutaneous or subcutaneous nodule, purplish in color, and usually appearing on the anterior surface of the upper arm. Satellite nodules appear early and may coalesce or become widely disseminated to involve the entire arm. The following is a report of such a case recently treated by us.

Case 2. A 55-year-old housewife in 1946 complained of bloody discharge from the nipple, associated with a firm lump in the breast. In July 1946 left radical mastectomy for carcinoma was carried out. Eight axillary nodes were examined and all were found negative for tumor. Consequently no radiation therapy was given at that time. Swelling of the arm with slight disability soon developed. A stage of clinical edema of the arm was reached within a few months and it persisted. For the ensuing eight years the patient had no other complaints and continued to feel well. In 1954 a small indurated lump developed on the lateral aspect of the upper arm. It was non-tender and had a purplish center. This was excised on July 16, 1954, and was reported as lymphangiosarcoma. Later in the year a second such tumor appeared in the swollen arm. On December 30, 1954, radical excision of the subcutaneous tissues of the upper arm was done and a split-thickness skin graft was applied. At this time the circumference of the left arm was 10 cm. greater than that of the right arm. Radiation therapy was also applied to the swollen arm in an effort to discourage formation of new tumors. Another recurrent purple nodule became evident in the summer of 1956 and was followed shortly by an outbreak of dozens of similar rapidly growing tumors. In the early part of 1957 the arm developed further swelling, and finally nearly the whole arm was covered with draining, fetid tumor masses (Figure 1) re-

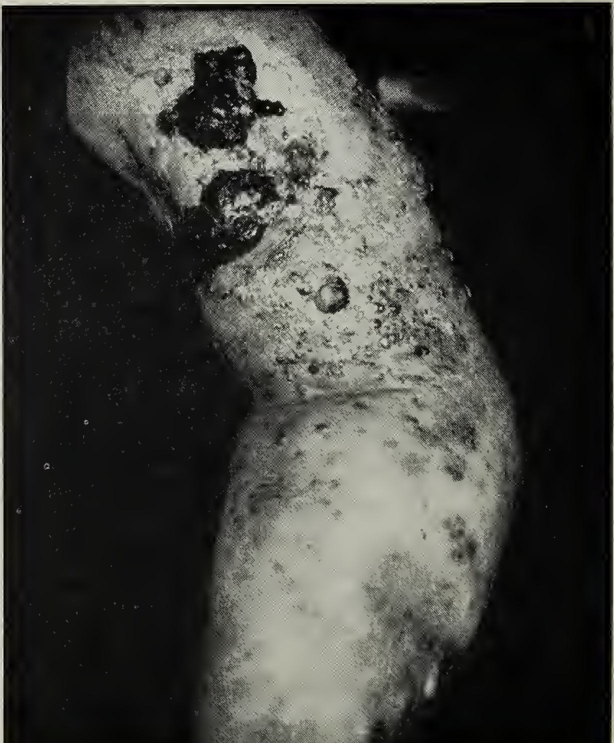

Figure 1.—Arm of patient in Case 2, nearly completely covered with draining tumor masses.

quiring several dressings each day and confining the patient to her home. Because there was no evidence of distant spread, a left shoulder girdle amputation was done on May 7, 1957, and the patient convalesced readily. She was temporarily rehabilitated by the amputation, but died of progressive malignant growth in December 1957.

In cases of this type rapid metastasis with fatal outcome is the rule. There has been but one case of five-year survival reported in the literature. Histologically the lesion resembles hemangiosarcoma. The closely spaced elongated spindle-shaped cells have poorly defined cell boundaries, a scant amount of cytoplasm and large ovoid vesicular nuclei. It is of special interest that while these tumors are apparently unrelated to mammary cancer they have only been seen in the lymphedematous arm after mastectomy for cancer and in no other type of extremity edema.

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Thyroid Cancer in Youth

DONALD W. PETIT, *M.D.*, BORIS CATZ, *M.D.*, and PAUL STARR, *M.D.*, Los Angeles

• Study was made of 11 patients under 20 years of age with thyroid cancer. Nine were girls and two boys. Eight of the patients had first sought medical advice because of cervical adenopathy. Nine of the patients had had x-ray therapy to the head and neck previous to the diagnosis of the thyroid cancer.

THE ALMOST SIMULTANEOUS APPEARANCE of four young patients with cancer of the thyroid gland led to this report. These patients had received previous therapeutic radiation to the head or neck. Inasmuch as such radiation has been mentioned as a possible stimulus to the production of thyroid cancer,* it seemed appropriate to review the records of other youthful patients who had been observed in private practice or in the Thyroid Clinic of the University of Southern California School of Medicine at the Los Angeles County General Hospital.

MATERIAL AND RESULTS

Eleven patients in whom cancer of the thyroid gland was diagnosed before they were 21 years of age were studied. Some were observed more intensively than others (Table 1 shows the relevant data about them). There were nine girls and two boys in the series. (One of the boys has already been reported upon in detail.[2]) Nine of the patients had a documented record of previous radiation to the head and neck. Eight of the eleven had obvious metastatic disease when first operated upon. Two had definite and one had probable pulmonary metastasis, and all three had regional lymph node metastasis. Nine of the patients had scintigram and/or radioautograph studies of uptake of radioactive iodine (I^{131}) and in six of them uptake was demonstrated. Three of the eleven patients had a pure papillary cancer and no uptake was demonstrated in them (Cases 5, 7 and 9 in Table 1). The aims and technique of management (described in an earlier publication[11]) may be summarized as follows: First, total ablation of normal thyroid tissue and the removal of as much malignant tissue as possible surgically. Then I^{131} is administered in doses of one-tenth millicurie to ten millicuries and studies are carried out to detect an uptake of the radioactive material, using scintigram techniques after preliminary administration of thyrotropic hormone. If an uptake of radioactive iodine can be shown, 100 millicuries of I^{131} is given by mouth. This process is continued with interval studies using millicurie doses for tracer purposes until no further uptake can be demonstrated. Then therapy with I^{131} is discontinued. During this whole period the patient is kept in a euthyroid state by the administration of thyroid hormone or L-thyroxine. This requires daily dosage of 0.2 to 0.4 gm. of desiccated thyroid or 0.2-0.4 mg. of L-thyroxine.

At the time of this report one patient five years after treatment (Case 1, Table 1) had detectable tumor tissue—metastatic pulmonary lesions that were not shown to take up I^{131} and that progressed in spite of the administration of a total of 250 millicuries of I^{131}. Another patient had questionable pulmonary metastasis. The rest were free of metastasis as nearly as could be determined. All patients were euthyroid and asymptomatic. The time since treatment at the time of this report ranged from ten months to nine years.

This series of eleven patients underscores the necessity for biopsy of persistent enlargement of cervical lymph nodes in children. In eight cases in this series the diagnosis was suggested by such adenopathy. Other observers have reported that in two-thirds of children with thyroid cancer, medical examination is sought because of lumps in the neck.[1,13] Case 6 (Table 1) is an example of the problems that can arise. The original diagnosis was made because of cervical adenopathy. The patient had a long previous history of respiratory tract infections and had been noted to have almost continuous enlargement of lymph nodes in the neck. After diagnostic operation and removal of one cancer-containing node, a new lump in the neck was noted six months later. This was removed and found to be simple hyperplasia. Then, six years later, enlargement of nodes in the neck occurred again. Of seven nodes removed, only one was cancerous.

About 25 per cent of nodular goiters in children

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*References 3, 4, 5, 6, 7, 10.

TABLE 1.—*Data on 11 Patients Under 21 Years of Age with Thyroid Cancer.*

Case No.	Age at Diagnosis —Sex	Type of Cancer	Sites of Metastases	Previous Radiation	Surgical Procedure	Avidity of Tumor for I^{131}	Cumulative Total I^{131} Therapy	Status at Last Report
1.	11 — M	Follicular	Rt. Cervical Nodes Lungs	None	Total Thyroidectomy Rt. Radical Neck Dissection	Yes by Scintigram	446.5 Mc	Alive, Euthyroid* No Demonstrable Metastasis Follow-Up—5 Yr.
2.	18 — F	Mixed Papillary Follicular	Lt. Cervical Nodes	Yes—Age 8 Nasal Sinuses & Lung Roots Total 240 r	Total Thyroidectomy Excision of Node	Yes by Radioautograph	100 Mc	Alive, Euthyroid* No Demonstrable Metastasis Follow-Up—1 Yr.
3.	13 — F	Mixed Papillary Follicular	Suprasternal Cervical Nodes	Yes—Age 4 Adenoids Total 300 r	Total Thyroidectomy Excision of Node	Yes by Radioautograph	100 Mc	Alive, Euthyroid* No Demonstrable Metastasis Follow-Up—1 Yr.
4.	12 — M	Mixed Papillary Follicular	Bilateral Cervical Lymph Nodes (?) Lungs	Yes—Age 3 Adenoids Total 240 r	Total Thyroidectomy Rt. Neck Dissection	Yes by Scintigram and Radioautograph	150 Mc	Alive, Euthyroid* No Demonstrable Metastasis Cord Damage, Follow-Up—1 Yr.
5.	11 — F	Papillary	Lt. Cervical Nodes	Yes—Age 1 Thymus Amount Not Known	Total Thyroidectomy Lt. Radical Neck Dissection	No by Autograph or Scintigram	No Therapy	Alive, Euthyroid*, Hypoparathyroid, No Demonstrable Metastasis, Follow-Up—1 Yr.
6.	5 — F	Papillary Follicular	Lt. Cervical Nodes	Yes—Age less than 1 year Thymus Total 264 r	April '51, Lt. Lobectomy & 1 Lymph Node, Oct. '51 Lymph Node (Benign)	No by Scintigram	No Therapy	Alive, Euthyroid* No Demonstrable Metastasis Cord Damage, Follow-up—7 Yr.
					Aug. '57 7 Lymph Nodes on Lt., 1 Had Tumor	Faint by Radioautograph	100 Mc	
7.	13 — F	Papillary	Lt. Cervical Nodes Lungs	Yes—Age 6—Adenoids Yes—Age 10—for Adenitis Amount Not Known	Total Thyroidectomy Lt. Radical Neck Dissection	No by Scintigram	250 Mc	Alive, Euthyroid, Grad. Inc. in Size of Pulmonary Metastasis, Follow-Up—1 Yr.
8.	12 — F	Follicular	None	Yes—Age 8 for Adenitis 375 r Left Neck 225 r Right Neck	Rt. Hemithyroidectomy	No Study	30 Mc	Alive, Hypothyroid Follow-Up Poor 5 Yr.
9.	18 — F	Papillary	None	No	Rt. Hemithyroidectomy	No Study		Alive, Euthyroid* No Metastasis Follow-Up—2 Yr.
10.	15 — F	Follicular	None	Yes—Age 2—tbc Adenitis 250 r Left Neck 250 r Right Neck	Lt. Hemithyroidectomy	Yes—Remnant Tissue by Scintigram	80 Mc	Alive, Euthyroid*, Pregnant No Metastasis Follow-Up—9 Yr.
11.	9 — F	Papillary Follicular	Lt. Cervical Nodes	Yes—Age 2 Tonsils Amount Not Known	Total Thyroidectomy Lt. Radical Neck Dissection	Yes by Scintigram Remnant Tissue & Cervical Nodes	44 Mc	Alive, Euthyroid* No Metastasis Follow-Up—10 Months

*Taking Thyroid or L-thyroxine. Mc = millicuries are cancerous. Hence extirpation of any solitary nodule in a child's thyroid gland is warranted.

It is too early to decide whether or not there is a true increase in this illness. Winship's[13,14] continuing study may settle the problem. Available data indicates that the incidence may be rising. Hayles[8] reported 46 children with cancer of the thyroid gland in the period 1908-1955 at the Mayo Clinic—half of them in the final six years of the period.

The use of the technique described earlier avoids the long disabling periods of myxedema that are associated with other methods of management. Catz showed that receptive tumor tissue can be stimulated to take up I^{131} by giving the patient thyroid stimulating hormone in doses as large as 0.43 gm. daily. Not all the patients in the present series followed the outlined program in all details. One did not return for care and was not amenable to any of the usual socio-medical procedures. Table 1 shows the variety of surgical procedures and the varying amounts of I^{131} that were used. The efficacy of therapy in this series will be hard to evaluate for that reason. Furthermore, a 20-year period of follow-up is probably the minimum as a basis for any conclusions about patients so young.

Nine of the 11 patients had received therapeutic external irradiation before the diagnosis of cancer of the thyroid gland was made. What role, if any, did this play? In 1950 Duffy,[6] commenting on a group of 28 children with thyroid carcinoma, ten of whom had had previous irradiation,[6] was noncommittal as to whether radiation was related to the later development of thyroid cancer. Seven years later, when he again summarized the available data regarding radiation to the head and neck and thyroid cancer,[5] he reached the tentative conclusion that radiation is possibly carcinogenic to the normal pre-adolescent when given in therapeutic amounts. His excellent summary contained a good bibliography of the current clinical and experimental background of this situation.

The discussion at the moment centers around the proportion of patients in two previously reported series that had had x-radiation to the head and neck before cancer was diagnosed: Ten of 28 cases in one series[6] and 15 of 15 in the other.[3] In the present series 9 of 11 patients had had previous x-radiation. As yet, there have been no surveys that would establish the incidence of head and neck radiation in a population of the kind represented by these patients. Yet this is of paramount importance, for the significance of the observation depends on it. This problem cannot be approached by the impersonal questionnaire technique particularly on a nation-wide basis; nor can a review of old records be used. The low incidence of previous irradiation reported by Winship,[14] by Horn[9] and by Warren[12] could well be accounted for by deficiencies of history-taking techniques. In the series reported herein, the patients and the families often had forgotten the earlier irradiation, and it was only by persistent direct questioning that the facts were found and documented.

The controlled studies of Simpson and co-workers,[10] in which it was noted that there were six cases of thyroid cancer in 1,400 children who received previous head and neck x-radiation and no cases in a group of 1,791 siblings not so irradiated, are of great interest. The control factor was imperfect, however, inasmuch as there was no evidence that the non-irradiated group had the same illnesses as the irradiated children. It is not too far-fetched to imagine that states of chronic infection and lymphoid hyperplasia could be a stimulus to thyroid cancer.

With the ultimate answer not yet at hand, it would nevertheless seem prudent to avoid, if possible, therapeutic irradiation of the head and neck of pre-adolescent children with a normal thyroid gland. There are no statistics at this time to suggest that similar limitation should apply to children with hyperthyroidism; time may bring such data.

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Open Ward Management of Acute Alcoholism

Experience with a Pilot Program

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• Sixty acutely alcoholic patients were treated in unsegregated rooms of two to twelve beds in a general hospital to determine the feasibility of open ward care. Personnel caring for them were first educated in the nature of alcoholism, the aberrations it produces and treatment with tranquilizing drugs. Fears and objections were overcome.

Violent or unpredictable patients were excluded from the test, but those with alcoholic hallucinations or delirium suspectible to control were admitted. Preliminary physical examination was done to find out whether there was coincidental disease. In three patients, one with subarachnoid hemorrhage, one with severe anemia and one with pneumonia and shock, this examination followed by prompt treatment was probably life-saving. Tranquilizers, fluids and vitamins were given routinely, by mouth as soon as possible.

Alcoholic patients were found to be no more unmanageable than others.

If it were generally accepted that acutely alcoholic patients, diagnosed as such, could be admitted to open ward care in general hospitals, candor in diagnosis would be encouraged thereby, coincident disease probably would be promptly recognized if present, and long-term treatment for the alcoholic addiction could be begun early.

Very few general hospitals now admit acutely alcoholic patients routinely without requiring at least segregation in a private room and special nurses. In 1956 the Council on Mental Health of the American Medical Association, in its report to the House of Delegates, strongly urged that tractable alcoholic patients could and, indeed, should be admitted and cared for just as any other ill persons are. Dealing with dangerous degrees of intoxication requires skills that often are not available except in general hospitals. Also coincidental illnesses that could be fatal if not recognized and promptly treated are more likely to be discovered in a general hospital. Despite these and other arguments, however, the question remained: Could acute alcoholism be treated without undue stress on the staff and without disruption of routine?

For the answer, Mount Zion Hospital and Medical Center undertook a pilot program under the sponsorship of the State Alcoholic Rehabilitation Commission of California, now a division of the State Department of Public Health. Selected alcoholic patients were to be admitted to wards or to two-bed or four-bed accommodations, without segregation into special rooms and without special nurses. Half the patients were to be referred from an alcoholic clinic, the Adult Guidance Center, the rest by the attending staff of the hospital. The commission subsidized that part of the costs of hospitalization which the patients were unable to afford. It was felt that 60 patients would be sufficient for adequate demonstration.

One of the authors (Perrow) inquired among the nurses, vocational nurses, aides and student nurses for their reaction to the idea of such a program and the care of the patients. (A study of this inquiry will be reported in detail elsewhere.) More than half approved; they felt that care for acutely alcoholic patients should be carried out in general hospitals. Many mentioned that such patients are indeed ill and need medical care. However, more than two-thirds felt that special facilities would certainly be needed, that their own work would be increased, and that alcoholic patients are more difficult to manage than others. It became clear that these negative attitudes among the persons who were to have the most contact with the patients would hinder if not seriously obstruct the program. Therefore the preliminary practical training and the initial screening of patients were so directed that such attitudes would not be reinforced.

Personnel of all departments that were to participate in the care of alcoholic patients were thoroughly indoctrinated before any such patients were admitted. An internist first presented the physiologic basis of alcohol intoxication, then reviewed the complications due to drinking, both acute and chronic, and carefully delineated and explained the clinical syndromes of hallucinosis and delirium tremens. Training in the treatment with tranquilizing drugs was given in terms of dosage, possible complications and expected effects. Alcoholism was compared with

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diabetes mellitus as another chronic condition with acute phases and frequently with long-term complications. A psychiatrist then gave simplified but thorough discussions on the psychodynamics of drinking, drinking patterns, the varieties of personality disorders associated with alcoholism and the meaning of drinking in various emotional conflicts and abnormal interpersonal relationships. At all times the immediate and the long-range values of a non-punitive attitude were stressed. In all cases the alcoholic was to be treated like any other patient with a disease. To the question: "But won't he go right out and drink again?" or "Won't he be back here again sooner or later?" an answer was formulated to show that this project was not meant to be a cure for alcoholism but only a treatment of the acute stage, and perhaps the beginning of a long-range therapy program. Many expressed doubt, as noted above, and many expressed fears. Some were genuinely curious, and asked such questions as, "What do you say to a patient who sees an elephant?"

SELECTION OF PATIENTS

The medical director screened all patients at the start of the program with exceptional care. He excluded—

1. Those with violent delirium tremens;
2. Those whose previous drinking history was unknown to their physicians;
3. Those who were overtly unmanageable, uncooperative and unwilling, showing a degree of disturbance traditionally excluded from general hospital care, regardless of the diagnosis.

He included those with—

1. Alcoholic hallucinosis;
2. Delirium tremens susceptible to easy control;
3. Acute complications of drinking, such as gastritis and intoxication to dangerous levels, or the withdrawal phenomenon commonly known as "the shakes";
4. Compulsive drinkers whose admission would interrupt a current "binge," especially in the early phase.

In addition the first few patients were selected to provide a variety of personality types and various professions to suggest the complexity and multiple, individual factors in the make-up of an alcoholic patient.

THE ADMISSION PROCEDURE

Every patient was first seen by the Adult Guidance Center therapist or by his private physician, so that his general condition was known before his coming to the hospital. The medical director made a preliminary screening by telephone and, when indicated, saw the patient before admission. Every patient was accompanied by an attendant, a friend or a relative. The patient first came to the emergency room where he was promptly seen by the medical resident on call, who made a preliminary physical examination with special attention to blood pressure, heart and lungs and abdominal viscera. The purpose was to rule out coincident disease, such as pneumonia, or any abnormalities which might contraindicate use of certain drugs or strong sedatives. The first sedation was administered in the emergency room and when the effect was apparent, usually within 30 minutes, the orders for care were written and the patient was wheeled to his assigned bed in the hospital. His care then did not differ from that of any other patient. He was placed in an accommodation of two to 12 beds—but not in a private room. At the beginning of the program every step was carefully supervised by the medical director.

THE MEDICAL MANAGEMENT

The initial treatment in the emergency room consisted of intramuscular or intravenous injection of 50 to 100 mg. of promazine, the amount depending on the need for sedation. The same drug was administered in 50- to 100-mg. doses intramuscularly every two to four hours as required for restlessness. Meprobamate orally, 400 to 800 mg. every six hours, was begun as soon as possible. Attention to hydration consisted in intravenous fluid therapy when indicated and oral administration as soon as possible. A multiple-vitamin supplement was given in the intravenous fluids or by intramuscular injection, or orally when tolerated. Proclorperazine was sometimes administered by intramuscular injection and orally. Some patients required no sedation whatever, being too ill from accompanying disease. Narcotic drugs or liquid medications recognizable by odor or taste were not routinely given.

A complete medical work-up was performed on all patients, including history-taking, physical examination and liver function tests, as well as routine laboratory studies. Other laboratory studies were ordered as indicated.

THE STUDY TEAM

Most of the patients were seen by a social worker who elicited environmental information and arranged appointments for follow-up care. A resident in the psychiatry department assigned to the program made a diagnostic work-up. The staff concerned met weekly to keep current problems in focus. The social workers, medical director, psychiatric consultant, psychiatry resident, chief nurse, a sociologist and representatives from the admitting department, emergency room and the hospital administration attended meetings when special problems arose involving those departments. A recommendation for follow-up care was given to the referring physician or to the Adult Guidance Center.

CHARACTERISTICS OF PATIENTS

Among the first 51 patients, ages ranged from 27 to 61 years, average 48 years. Eighteen were women. The average number of years of drinking was 19, with a range from 2 to 40 years. There was no significant difference between the clinic patients and the private patients in these respects.

From questionnaires that were completed by 33 patients it was learned that 11 of them had been treated for a similar condition in three or more of the following ways: By a private physician, in a private sanatorium, in a county hospital and in a state hospital. Sixteen had had at least one admission to the county hospital. Since admission to the county hospital for alcohol intoxication indicates an extreme degree of illness, the range of patients in the study was probably of average clinical severity. The average hospital stay was four and one-half days. Among the first 44 patients, 16 had suggestive or overt evidence of liver disease. Fourteen had coincidental disease of a serious nature, such as paroxysmal tachycardia, diabetes mellitus, pneumonia, subarachnoid hemorrhage, severe anemia and epilepsy. For three of these patients, the recognition and prompt treatment of the accompanying disease was felt to have been life saving. In these cases the accompanying disease was subarachnoid hemorrhage, anemia (less than 5 gm. of hemoglobin per 100 cc.), and pneumonia with shock.

MANAGEMENT PROBLEMS

In two of the first 60 patients, management problems were so great that transfer to the county psychiatric division had to be arranged. One of them had Korsakoff psychosis, pellagra and lice—a true "Skid Row" complex. The second had severe paranoid ideas, a convulsion, cirrhosis and pellagra. These patients might have been managed in segregated rooms with special attendance, but it was felt that the chronic nature of the conditions outweighed the acute. Two other patients had to be restrained for brief periods soon after admittance. Six were recorded as mildly difficult—wandering in the hall, disturbing a roommate, asking to sign out, complaining about the drugs being given and refusing to take them, and one patient breaking a toilet fixture but promptly becoming quiet and manageable thereafter.

For comparison, a review of the records of 200 patients admitted for "cirrhosis," "gastritis," and "gastroenteritis" in 1956 was carried out, and it appeared that at least 31 were overtly intoxicated. For seven, segregation, special nurses, restraints or similar measures were needed. Another six were described as uncooperative or noisy. Thus, 43 per cent of these presented the kind of problems encountered in only 10 per cent of the patients in the present study.

THE IMPACT OF THE PROGRAM ON THE HOSPITAL

After ward treatment of 60 cases, the medical board approved continuance of the program. The attitudes of many of the nursing staff showed a definite reversal from the preliminary questionnaire, although some were still definitely negative. Most of the nurses who participated came to feel that it is much better for their purpose to have alcoholic patients admitted under the proper diagnosis, rather than a false one, and most (80 per cent) feel the hospital should now make it a policy to admit alcoholic patients without the traditional requirements of special rooms and special nurses, providing there is adequate screening of patients.

CONCLUSIONS

Our experiences show that with careful selection of patients, preliminary training and indoctrination of personnel, and the use of modern tranquilizing drugs, most patients with acute illness due to drinking may be successfully managed in a general hospital without segregation or special care.

From the patient's standpoint, such care is an ideal treatment of his symptoms, provides a break in a compulsive drinking spell and, at times, may be life-saving through the timely recognition and treatment of coincidental illness.

Ward care provides an ideal setting for the initiation of long-term treatment of alcoholism.

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A Simplified Method for the Urinary Excretion Test Of Absorption of Cobalt 60 Labelled Vitamin B_{12}

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• It is possible to do both radioiodine uptake studies and urinary excretion tests for absorption of Cobalt 60 vitamin B_{12} with the same basic equipment. If a spectrometer is used and the samples properly prepared, the latter procedure can be performed quickly, accurately and with a minimum of laboratory equipment. This is a distinct advantage to a small laboratory with limited facilities, and should help to make both of these useful tests available for clinical use.

THE URINARY EXCRETION TECHNIQUE for measuring the absorption of Vitamin B_{12} labelled with Cobalt 60 is well established as a useful procedure in clinical medicine. Since in most laboratories the test is rather infrequently done, it would be desirable to be able to do it with basic counting equipment such as might be available for radioiodine studies. It is the purpose of this communication to describe such a method.

PROCEDURE

The basic procedure is that of Miller and coworkers.[2] Approximately 0.5 ml. of a stock solution of Co 60 Vitamin B_{12}, (specific activity 1.073 microcuries per mcg.) is put into a 100 ml. volumetric flask and water added to bring the solution to the 100 ml. mark. Ten ml. of this dilution is transferred directly to a 2-quart paraffin-lined disposable milk carton, which then is filled to the top with water and sealed. This serves as a standard and contains approximately 0.05 microcuries of Cobalt 60. The remaining 90 ml. is administered to the patient (approximately 0.45 mcg. of Vitamin B_{12}). Two flushing doses of 1 mg. of non-radioactive Vitamin B_{12} are administered, three and 24 hours later; and two 24-hour urine specimens are obtained by having the patient void directly into identical 2-quart milk cartons. As these cartons are received, they are filled to the top with water and sealed. By using a scintillation counter, the Cobalt 60 Vitamin B_{12} content of both specimens of urine and of the standard are determined at the same time at the completion of the test, and results are expressed as percentage of administered dose.

COUNTING PROCEDURES

A scintillation counter (Reed-Curtis) utilizing a 2″x2″ thallium activated sodium iodide crystal and spectrometer is used for counting. The crystal, photomultiplier tube and pre-amplifier are enclosed in a ¾-inch lead shield, and no other shielding is used. The probe assembly is rotated to the vertical position and the milk cartons placed directly on the top of the crystal (Figure 1). The lead collumator is removed for this purpose. Since the diameter of the probe assembly is the same as the horizontal dimension of the milk carton, and all volumes are identical, all geometric factors are constant and reproducible. With the spectrometer (pulse height discriminator with variable window width) adjusted to the Cobalt 60 spectrum and the background count* approximately 60 counts per minute, 0.05 microcuries of radioactivity contained in the standard gives a gross counting rate (background plus sample) of at least seven times the background. By this means, the counting error can be held to less than 5 per cent when each sample is counted for ten minutes.

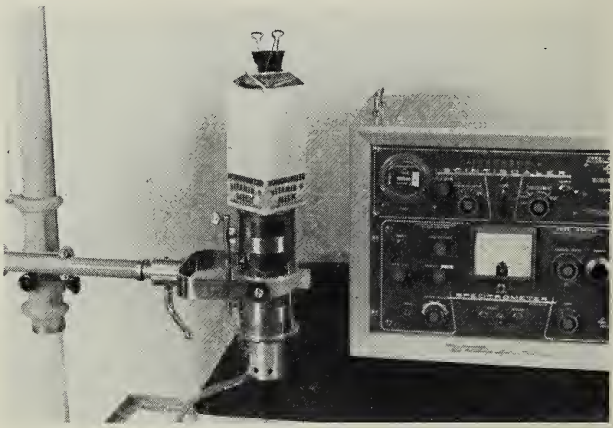

Figure 1.—Urine sample in counting position.

DISCUSSION

Since the radioiodine uptake by the thyroid, and the urinary excretion test for measuring the absorption of Cobalt 60 Vitamin B_{12} are two useful clinical procedures, it would be desirable to be able to perform both tests with the same basic counting equip-

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*Background is the normal radioactivity found in the surroundings.

ment. The volumes to be counted in the latter procedure are of necessity large, and a specially designed well counter[1] or extensive lead shielding must be used if accurate counting is to be obtained with a well counter. On the other hand, the amounts of radioactivity utilized in the urinary excretion test are small, and counting rates high enough to insure reasonable accuracy are difficult to obtain with the usual unshielded probe counter. The spectrometer, by utilizing "electronic shielding," permits accurate counting without sacrificing the flexibility and portability of the equipment. By using disposable containers and counting all specimens in 2-quart volumes, the possibility of contamination from a previous test is eliminated, and there is no necessity for taking aliquots or precipitating the cobalt in the urine. A further advantage is that the standard and the urine specimens contain similar amounts of radioactivity and are counted at the same time. This automatically corrects for small daily fluctuations in counting rate due to changes in line voltage and in background radioactivity.

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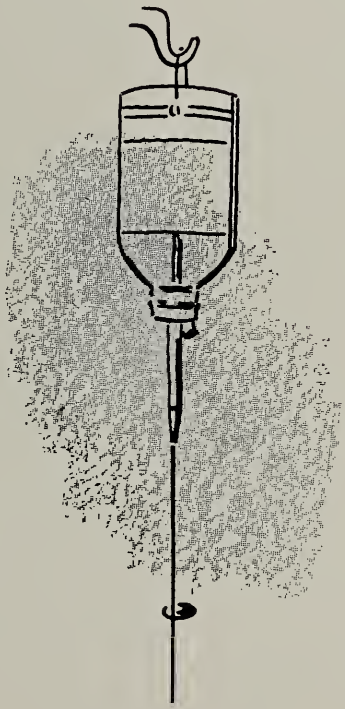

Teenagers as Patients

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• Adolescents tend to abandon the program of preventive and therapeutic medical care established for them in infancy by pediatrician and parents. Factors in this resistance were analyzed, and a teenage clinic was established. In review of experience over a four-year period, during which the number of appointments monthly rose from 20 to 300, it was noted that the needs of adolescents are related to their stage of development. In the teenage clinic the adolescent assumes an increasingly important role in communication between himself and the physician, with concurrent diminution of the parental role.

Special goals of medical counseling of adolescents include strengthening of parent-adolescent relationships and adjustment of the teenager to school and community.

The adolescent requests information about normal and abnormal growth and development (obesity, acne, sexual changes). Somatic abnormalities noted on physical examination were of three classes: (1) "Normal" deviations (male gynecomastia, adolescent striae, functional heart murmurs). (2) Medical problems usual to persons of any age. (3) Comparatively rare entities (lupus erythematosus disseminatus, Laurence-Moon-Biedel syndrome).

THE AIM OF A PEDIATRICIAN is to give his patients a healthy start in life. He does this by giving the best advice and treatment he can for illnesses and disabilities as they occur, by stressing preventive medicine and even by considering the patient in relation to his environment, particularly in respect to his family, peers and school.

But what happens to this carefully followed patient when he becomes a teenager? Does he continue to come in for at least an annual physical examination? Does he do this in the familiar office of his pediatrician? Does he start seeing his parents' physician? Or does he feel too old for the one medical facility, too young for the other and therefore avoid seeing any physician for as many years as he can get away with it?

In an attempt to improve teenagers' use of medical care facilities, a teenage clinic was established in 1953 at the Kaiser Foundation Medical Center in Oakland.[4] In the teenage clinic, the desire, at all times, has been to give good medical care for members of this age group in an environment acceptable to them. We who were the staff of the clinic tried to learn from the patients, by their responses to our methods and techniques, their preferences in a medical care program for teenagers.

We wondered, as we started, if we would understand the patients. Maybe even their language would not be intelligible to us. How should a physician answer if he were to be greeted with: "Cut the cool corner, big Doc! I'm going to have a blast with my chick tonight and I've got to make like Sputnik or she'll nix the make-out—and that would get me all shook up, man!"? But as the early trickle of 20 to 25 appointments a month gradually and sporadically increased, over a three-year period, to 300 appointments a month, the pediatricians and internists who worked in the clinic found nearly all the patients speak ordinary English. Very few of them use "jive-talk" with the physicians—and those that do are quite ready to translate for the non-"hep." None of them have "acted up" dangerously in the office—in spite of the fact that more and more of the 4 per cent of adolescents who get into trouble with the law are being referred to our clinic for medical observation.

We found, too, that other expected differences (from younger children on the one hand and from adults on the other) were not so great in the actuality as in our expectation. After all, the teenager has been a child—and most often one who has been cared for by a pediatrician or a family physician—and so relates to a physician quite well. That is, *if* he comes to see one and *if* he is satisfied with the medical care received.

What does an adolescent patient want from a physician?

We and others have found that the patient wants to know he is in the right place. He responds in a medicotropic way to a physician he believes to be oriented to him in the stage of life in which he finds himself. A bulletin board with clippings and cartoons aimed at teenagers in one corner of the waiting room may give the "right place" feeling. Magazines like *Seventeen* and *Mademoiselle* for the girls and sports and mechanical magazines for the fellows also help in the same way. The slight extra effort entailed in getting some local high school and col-

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lege publications for the waiting room is also appreciated.

But, of course, first impressions cannot be the only ones, and the surroundings of the waiting room and office are only secondary to the physician himself. From him the patient wants what every patient wants, and what the teenager wants from everyone: Respect and honesty—respect for the patient as an individual and a real attempt to understand him as an individual; honesty that leaves no room for distrust in the physician-patient relationship, the kind of honesty that permits the physician to make known his abilities and qualifications, and to admit when necessary, "I don't know." When the physician does not know, his interest in the patient and the search for truth should motivate him to further study or research, or it should bring about a referral to another physician with more training or experience in the specific problem involved. Above all, the patient wants to feel "this is my doctor—one I can be proud of." A corollary of this must be that the physician's focus is more on the patient than on the parent (instead of the other way, as it is through so much of pediatric practice). All teenagers who have come into our clinic have appreciated the opportunity to talk to the physician without having a parent or other third person present.

Almost all of the few parents who insisted on staying with the patient at all times said they did so at the patient's request. In each case the adolescent made it clear that this was not what he really wanted. This "tip-off" that the parent was overprotective was often correlated with the parent's inability to permit his child to make the maturity-step-upward entailed in attending a teenage clinic of the kind described.

However, we have found that most adolescents do not object when parent and physician talk together without the patient being present. The benefits of a good relationship between parents and physician are nearly as important as those accruing from a good physician-patient relationship. More than this, with the help of an understanding "professional intermediary" the most important relationship of all, the parent-adolescent relationship, may be improved.

We have found that although the patients and their parents often have many complaints about each other, the parent is practically always held in real respect by the youngster. Admiration for the parent, unstated in words, frequently manifests itself by the child's carrying out a close, albeit unconscious, imitation of the parent, or by carrying out the *real* wishes of the parent—even when these real wishes are kept on a subverbal or sometimes even subconscious level.

Boys in this age group expect to, and practically always insist on, seeing a male physician. However, individual girls' preferences vary. Some girls prefer a woman physician, others a man. Most young ladies do not state a preference, but will see a man or woman physician with equal aplomb.

A question that has come up frequently is, "Is this a problem clinic?" Our answer is, "No, it is a medical clinic for teenagers." In effect, we are saying: "You don't have to consider yourself a 'freak' or a 'queer' or 'a problem case' to come here. If, however, you bring any problems to us, we do hope to be able to help solve them."

What medical questions are asked most frequently?

Since this is the only time of rapid growth and change in body development that occurs while the patient is conscious of the changes taking place, it is natural that we get many questions like, "Will I be too tall?" or "How can I lose weight?" or "Why are my hips too big?" Sometimes the question is put as a statement of fact: "I know I'll always be fat," "I'm terribly skinny," "I'll never grow as tall as my friends." Many young women of normal weight want desperately to be thinner. Many well-developed young men want to be heavier. In each such case the "ideal" body is envisioned as that of a movie actress, football player or other "dream" woman or man. The patient's uncertainty of what is a "normal range" of height and weight is increased by the vast majority of height-and-weight charts present in most physicians' offices today. Age, weight and height are certainly important variables, but the stage of development is most essential to give meaning to "normal" ranges. This is present in only one such set of charts or graphs, that of Bayley.[1]

Questions about stage of development are frequent also. Again the "ideal" may be disturbing to the girl who does not have as much mammary tissue as some of the more popular movie queens have, or pretend to have, these days. Sometimes the problem is a real or fancied over-abundance of nature's gifts. Early, late, irregular or painful menses cause much questioning of the physician. McArthur's excellent summary-article on menstruation in adolescents[3] has helped us to answer such questions with more assurance.

Boys also often need reassurance about their breasts. Gynecomastia (mammoplasia) is a frequent phenomenon. Telling them that their breast tissue is normal for their stage of development, and that it will recede, is helpful, but we have found that specific reassurance that "cancer" is not present causes the most obvious expressions of relief from these young men, whether or not they have asked about their breasts.

Reassurance about, and explanation of, the normal striae of adolescence, seen in young men as well as young women and in thin as well as heavy adolescents,[6] have also elicited thankful responses and some apparent release of tension. Here again some of the patients let us know that they feared the "abnormal stripes" of the skin were due to "cancer." Others say, "Doesn't it mean that there's something wrong with my blood vessels?"

Too much hair can bring questions from girls. Too little hair can worry the boys—"Why don't I have to shave yet?" Hair-style in a style-conscious teenager (boy as well as girl) can give a clue to the patient's self-orientation—whether his aim is to conform to the adult society around, to a childish adolescent society, or to a "rock 'n roll" society at or near the open stage of rebellion against adult mores.

"My pimples" may be the biggest question in the mind of a fairly clear-skinned adolescent. "I don't care—I know it's from hormones and I'll outgrow it," may be the response of another, who is asked if she wants treatment for a moderately severe case of acne. One patient may be happy to wash frequently and to follow the low fat diet suggested to help keep acne under control. Another will say, "I'd rather eat chocolate and have pimples" (or may take the latter choice without ever stating it).

Such changes as occur in perspiration and mouth odors may be easily accepted or may bring a patient close to isolation from society—or hysteria.

Questions about menstruation and other "facts of (sex) life" are at the back of many other roundabout questions asked by patients. An occasional patient may even blurt out, "Who can I ask about things?" What things? "Oh, you know!" No—what things? "Oh, marriage and sex and things." Or maybe even more directly: "How about it? What's the medical low-down on intercourse?" Such questions may be readily answered by the physician, or they may be parried with questioning designed to learn not only what the patient is *really* asking, but what he or she already knows about the subject and where the knowledge was obtained. The book, *Facts of Life and Love for Teenagers*[2] has been found acceptable for parents *and* their teenage (or slightly younger) children.

Occasionally the question is one that indicates more experience on the part of the patient. "I've missed my period, and may be in trouble." In his article "Maternity Minus Marriage,"[5] Schauffler put into words the various attributes a physician may be called upon to show in such a situation. The question of "Should we or shouldn't we get married?" in such situations, and in others where the problem of maternity is not present, occasionally is asked of the physician who is a trusted counsellor. One such situation, in which 16-year-old Sandra and 17-year-old Pete were persuaded to wait a little before eloping to a justice of the peace, ended in a beautiful denouement. Sandra fairly readily stated that her prime reason for the planned marriage ceremony was to escape from her mother, who not only did not "understand me" but had "never loved me or treated me as a daughter." The couple were persuaded not to elope, and the parents agreed to their becoming engaged formally. Three months later, Sandra on one of her "stops to say hello" was no longer wearing the engagement ring. When asked about this, she calmly said, "Oh, I gave it back to him. Silly boy. I don't know what I was thinking of. He had the nerve to say something nasty about my mother to me!"

Of course, the prime function of any medical clinic is to give *medical* care and attention. The girl who confided in me about her planned secret marriage—and then let me talk her out of it—had come in first because of abdominal pains so severe that an appendectomy had been performed elsewhere (without affecting the complaint). But although this patient and others after careful investigation have been found to have no organic causes for their somatic complaints, the careful clinical examinations are certainly important. For even teenagers do get organic disease, and even where the complaint is functional, a good medical examination and interview is a tangible way of showing the patient that the physician is not only interested in the patient but accepts the patient's complaints as something real and worthy of study. If it then is found, as in the case of one 12-year-old boy, that the patient's headaches are the result of tension caused by ambivalent feelings about his father's taking a bride four years after his mother died (complicated by the knowledge that the mother had terrible headaches before she died of cancer of the brain), then reassurance that there is no cancer or other organic cause for the headaches may well banish the symptoms completely.

A physician who rescues a teenager with a functional heart murmur from the ranks of "cardiac cripples" helps him for his entire adult life. An enuretic patient who learns from a friendly medical expert that his enuresis is not because of "bad kidneys" and that it can be discussed calmly without loss of respect for him as an individual, often is helped to feel mature enough to lose the unconscious need for the enuretic habit. Asthma and epilepsy, diabetes and specific language disability are problems that require a physician's medical knowledge and an understanding of how emotions can affect the body.

But there must not be too great stress on the psychological aspects of medicine. A 16-year-old girl in a bad home situation who was having some difficulties in school began staying home from school because of vague, changing complaints of pain in her fingers in the morning. Persistence of the complaints led to medical study. No abnormality was noted except a very high blood sedimentation rate —and then the finding of L.E. cells in her marrow, to make the diagnosis of diffuse lupus erythematosus.

Medical problems observed in other age groups occur in adolescents too, of course. Infections, allergic reactions, collagen diseases, even rare neoplasms are seen. Osgood-Schlatter disease is not uncommon. Such rare entities as Laurence-Moon-Biedel syndrome, Turner's disease and Marfan's syndrome have been observed in our clinic.

By treating teenagers with respect, as fellow human beings, we physicians can do much to reassure the adolescents themselves—and society, generally—that many popular misconceptions about teenagers are wrong; that the word *adolescent* is not synonymous with *delinquent;* and that the 14-year-old (rightfully) disturbed victim of a train-car accident was not correct when he defined an adolescent as "someone that's sick." Webster says adolescence is "the state, process, or period of growing from childhood to maturity; youth, or the period between puberty and maturity."

A physician who enjoys new learning experiences will achieve many satisfactions by having teenagers as patients. He will be a good "teenagers' doctor" if he shows interest in the individual adolescent patients, and if he understands them in their situation, as he must understand each patient and that patient's environment, regardless of the age range of the patients he treats. And he will be teaching the values of good medical care, preventive and curative, to someone who tomorrow will be the adult of our society and will decide on the advantages or disadvantages of the medical care we offer them and their families.

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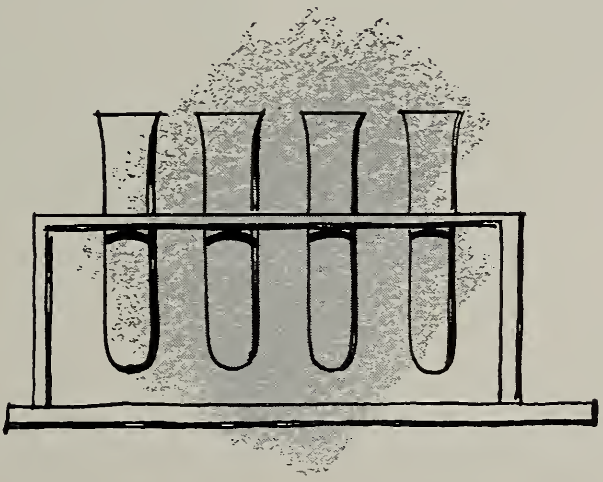

Care of Cerebral-Palsied Children

The Special Role of Pediatricians

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• Because the cerebral-palsied child is also a growing person whose development should be encouraged along as normal a course as possible, the pediatrician may well take the lead in coordinating orthopedic, psychiatric, educational and vocational services for such children. In El Centro this policy has been followed in a school for handicapped children serving 30 with cerebral palsy, 15 of them pupils at the school. Those with sufficient intelligence and milder physical handicap attend a regular public school, while others are unable to attend even the special school.

Emphasis has been placed on working with children who are less seriously affected. As to children with severe neuromuscular and intellectual handicap, the chief effort is to prevent contractures and maintain function. The pediatrician confers monthly with all workers concerned with the child, and maintains liaison with the family physician who treats acute illnesses, including palsy seizures. Special effort has been made to investigate family circumstances such as foreign background which make it more difficult to evaluate the palsied child's true capabilities.

Increasing attention is being given to the role of pediatricians in the medical supervision of cerebral-palsied children.[1] Orthopedist and physical therapists have generally assumed responsibility for these children and therapeutic programs have been oriented toward defining and treating the neuromuscular handicap; but quite apart from the physical handicap, the child and his family are faced with other equally serious problems. The pediatrician can help the parents in learning to accept their child's handicap, in understanding the goals and limitations of a therapeutic program and in planning for their child's future. Through his understanding of physical and mental growth and of normal parent-child relationships he can assume responsibility for the care of a palsied child as well as provide leadership in programs for such children.

A PROGRAM UNDER PEDIATRIC SUPERVISION

The purpose of this presentation is to report one year's experience in an expanded program for the care of palsied children which was developed under pediatric supervision. Particular attention was given to interpreting the child's problem to his family, school and community. The result was an improved understanding on the part of all persons concerned with his immediate and future care.

This program was developed in El Centro, an agricultural community of 17,000 in the Imperial Valley near the Mexican border. Ten years ago a school for handicapped children was established by the Imperial County Board of Education, and it now teaches some 40 children with such handicaps as poliomyelitic paralysis, congenital dislocation of the hips, cataracts, seizures and cerebral palsy. Most of these children have been referred through the California Crippled Children Services.

There are 15 children, age 4 to 17, with cerebral palsy in the school, and also included in the program are an equal number with the disease who reside in the valley but either attend conventional schools or are kept at home because of the severity of their neural handicap. Among the pupils are monoplegic, hemiplegic, paraplegic and quadriplegic children. The intellectual capacity ranges from normal to intelligence quotients as low as 10. Before the initiation of the pediatric aspects of this program their care was supervised by an orthopedist who attended the school once a month, and a physiotherapist working full time.

The revised medical program was supervised by a pediatrician who attended the school one day a month. An orthopedist attended one day every three months. The physiotherapist continued on a full-time basis. A psychologist and a school nurse who were employed by the Imperial County Board of Education worked part time at the school. A social worker was available for consultation, and other consultation services were available through the Crippled Children Services.

As a first step a complete medical history was taken and examination was done in all 30 children with cerebral palsy. In the medical history, emphasis was placed on defining the child's motor and

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mental development, parent-child relationships, family attitudes and problems concerning the care and acceptance of the child. In each instance the child's teacher was available for comments on his progress in school. A social worker made a home visit to obtain additional information when indicated. Some diagnostic studies were available, for example, psychological and audiometer testing, urine and blood examinations, and roentgenograms. For more thorough studies the child was referred to a medical center.

At the pediatrician's monthly visits he conferred with the various staff workers, received their comments on the child, and summarized the medical problem. These conferences proved very valuable as a means of education of the school personnel in the medical aspects of the program. Recommendations were made for each child and responsibility for carrying these out was assigned to the appropriate person. These recommendations were reviewed again at subsequent conferences and a series of progress notes kept on each child. Particular attention was focused on (1) interpreting the child's medical problems to the school teacher, (2) developing an awareness as to how this child would eventually fit into the community, and (3) determining what resources would need to be developed for his eventual role in the community.

Physiotherapy programs, bracing and surgical procedures continue to be supervised by the orthopedist. The physiotherapy program for each child has been evaluated by the orthopedist and physiotherapist in terms of what therapy is expected to accomplish. Added emphasis is placed on working with those children with milder involvement and adequate mentality. In the cases of severe neuromuscular and intellectual handicap, emphasis is placed on preventing contractures and maintaining function.

THE EDUCATIONAL EFFORT

The educational effort has centered about the problem of mental retardation and the need for education of the mildly handicapped child. From clinical examination, psychometric testing and school reports, it was apparent that a number of the children were mentally retarded. This was brought to the attention of the teachers so that the teaching program could be altered to fit the needs of the child. Several children were dropped from school because their retardation was so severe that they could not participate in any school activities.

Obviously, children with intellectual impairment must continue to be identified so that an educational program better suited to their needs can be devised. However, it would not seem advisable to admit an uneducable child to a school for handicapped children. Custodial, residential or "day care" centers might better be developed within the community. Before the present program was begun, a number of children with these severe mental handicaps were admitted to the school because of their need for physiotherapy. The present policy is to continue with physiotherapy but to omit or minimize the educational aspects in such cases.

One of the functions of a school for handicapped children should be to rehabilitate the child physically, emotionally and scholastically so that he can enter regular school. However, once a child has entered a school for handicapped children, there is a certain reluctance to return him to a regular school. As the program progressed, it was apparent that in several children the handicaps were less severe and their mentality normal. These children were successfully returned to regular school for a portion of each day.

DISCUSSIONS WITH PARENTS

Each child's parents have talked with the pediatrician and have been advised of recommendations from the group conferences. It is desirable that the family receive this information from the pediatrician rather than from a nonmedical person. Often it has been necessary to reorient the family's thinking about future planning for the child in terms of remaining in the community, job placement, vocational training or custodial care. The question of institutionalization has been discussed with some parents; placement is not urged, only the advantages and disadvantages are discussed. In a number of instances the pediatrician and school nurse have visited the children's homes, and follow-up visits have been made by the school nurse or social worker. These visits have provided valuable information on the family's cultural background, medical problems and home life as they relate to the child.

Because of the high proportion of Spanish-speaking people in the community, the matter of language and culture becomes increasingly important. Some cerebral-palsied children who are regarded as subnormal in intelligence are only reflecting the strangeness of family and cultural background. There are no psychometric tests which take these differences into account, but the children's families have been studied in an effort to understand these unfamiliar backgrounds.

This program has aimed at better contact with other community forces to assure continuing care for the cerebral-palsied child. Close liaison was maintained with the family physician. It was felt that medical care for acute illnesses or problems related to cerebral palsy—seizures, for example, was better done by the family physician with the pediatrician acting as a consultant if necessary. Letters were sent to each patient's family physician summarizing the medical history and examination, recommendations and progress at school.

The program was valuable in providing a means for education of school and public health personnel in the medical, psychological and sociological problems which concern the palsied child and his parents. The group conferences, home visits and clinic examination were all used as material for education. Volunteer and business groups participated also, by assisting in physiotherapy, purchasing wheelchairs and other equipment, and establishing "day care" and residential centers. This part of the program serves to emphasize to these groups that the child is part of the community and focuses attention on community resources for vocational training, job placement, additional education or custodial care.

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Borderline Industrial Injuries

J. L. BARRITT, *M.D.*, San Francisco

• Sometimes in cases of injury in which a claim for compensation is made on the basis that the injury is attributable to the claimant's work, the etiology is not clear cut. Such injuries tend to merge with and to overlap non-industrial ailments.

This presentation deals with some of the more troublesome conditions of this order—among them chondromalacia of the patella, causalgia, Sudek's atrophy, shoulder-hand syndrome, whiplash injury, tenosynovitis, epicondylitis, acoustic trauma and acute coronary occlusion. Often in these conditions, it is almost impossible to determine accurately how much or how little of the associated disability is attributable to industrial cause. In most of them, however, early diagnosis and sympathetic management of injury when it does occur, are of great help in determining compensability and in returning the employe to suitable work.

ALTHOUGH THE MAJORITY of injuries that come before the California Industrial Accident Commission are more or less clear-cut clinical entities, such as sprains, lacerations, burns and fractures, there are others in which the cause is not always clear and the diagnosis is sometimes difficult. Frequently these injuries merge with or overlap non-industrial ailments so that the relationship of injury to the patient's work is debatable.

Some injuries of this kind involve special fields of medicine but the industrial surgeon is the one who first sees the patient. He is the one who must recognize the nature of the injury and direct the early treatment. Some of these borderline conditions have caused so much controversy and litigation that it would seem helpful to make note of them and to describe some of their usual clinical characteristics.

Chondromalacia of the Patella

In looking back over the records of many knee injuries which have come before the Accident Commission, it is apparent that the diagnosis of chondromalacia of the patella has been very frequently missed. This disorder tends to simulate so many types of knee derangement that the diagnosis is often made only in the course of an operation for repair of some other supposed condition.

Chondromalacia of the patella is quite common. Carr and Howard[3] reported 19 cases of this disorder in 60 consecutive cases in which knee arthrotomy was carried out. In ten of the 19 cases patellectomy was performed. These observers expressed belief that the cause of this condition is probably trauma and, secondarily, lack of blood supply and little regenerative power. The condition may be of idiopathic origin.[14] Symptoms may be precipitated by recurrent strains or by direct blows on the patella.[4]

The patient usually complains of pain, especially while climbing stairs. There is a feeling of insecurity and grating and sometimes pseudo-locking. Diagnosis may be difficult. Crepitation is the most common finding. The patient complains of pain when he extends his knee against resistance or when he tries to step up onto a chair. Firm pressure over the patella may cause pain. Quadriceps atrophy is usually present. Anterior-posterior x-ray views are seldom helpful but serial films made in tangential (axial) planes may occasionally reveal roughening or irregularity of the articular surface of the patella.

Often it is exceedingly difficult to ascribe the exact cause in cases of chondromalacia of the patella. Very often it occurs following trauma in arthritic persons who already have advanced degenerative changes in the knee. This and the tendency to simulate other knee disorders makes the evaluation of the industrial aspects difficult. Comparison with the opposite knee may give valuable information.

This condition is missed so frequently that it should be looked for whenever disability persists after an injury to the knee and findings of knee derangement of other types are lacking.

Treatment varies with the surgeon but will usually include quadriceps exercises. Excision of areas of diseased cartilage is advised by some surgeons. Patellectomy is a last resort.

The Reflex Dystrophies

Some of the disorders in this very troublesome group are reflex sympathetic dystrophy, causalgia, Sudek's atrophy and the shoulder-hand syndrome. The condition develops as follows: Following injury a painful local process initiates a reflex arc, probably by way of the sympathetic nervous system. The pain itself brings on vasospasm, which causes more pain, thus keeping up a vicious circle.[2] The various reflex dystrophies are not always clear-cut; they tend to merge and overlap. Each, however, does have certain individual characteristics.[5]

Presented before the Section on Industrial Medicine and Surgery at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

The stimulus which initiates the reflex arc is often a painful sprain, laceration, crush or infection. The symptoms and findings are out of all proportion to the original injury. Typically they consist of pain, swelling, edema, vasospasm, hyperesthesia and paresthesia. The skin is usually smooth and glossy and the skin wrinkles appear to be ironed out. The skin may be dry or there may be profuse sweating. The pain and swelling cause immobility. The immobilization in the presence of high protein edema fluid gives rise to fibrosis,[2] joint stiffness and deformity. In the early stages, pain, edema and hyperesthesia predominate, followed later by joint stiffness, deformity, atrophy and osteoporosis.

Causalgia. Causalgia is a form of reflex dystrophy. Pain is a basic feature in all the dystrophies but in causalgia it reaches its greatest intensity. The patient may not even permit the examiner to touch the injured member. The pain is usually more or less confined to areas supplied by the median or the sciatic nerve. Causalgia may result from relatively minor injuries. Infections and crush injuries of the fingers are frequent causes. The condition should be looked for in cases wherein tying, typing symptoms develop that are far out of proportion to the original injury, especially if the patient is of unstable type.

Sudek's atrophy. In Sudek's atrophy, while the general findings of the other types of reflex dystrophy may be present, it is osteoporosis that is the predominate feature. The condition seems to be often a sequel of painful unsplinted injuries. Joint stiffness and deformity are common residual conditions associated with it.

Shoulder-hand syndrome. Shoulder-hand syndrome is characterized by pain and stiffness in the shoulder and may or may not be associated with pain and swelling in the hand.[5] It is a type of reflex dystrophy and while trauma is a frequent cause, sometimes there may be no causative factor apparent. Steinbocker[26] reported a series of 42 cases, nine of which followed myocardial infarction. Among the other causes were trauma and hemiplegia.

The pain and stiffness in the shoulder may simulate that of bursitis or arthritis. It may be difficult to decide whether it was the injury blamed by the patient or some other, perhaps non-industrial, factor that was the cause. The disorder usually runs a rather chronic course and residual stiffness in the hand and shoulder are common.

Shoulder-hand syndrome seems to have become something of a dumping group for upper extremity ailments in which the diagnosis is in doubt. In borderline cases of shoulder disease in which the patient has been seen by a succession of examiners, one of the diagnoses is usually shoulder-hand syndrome.

Treatment of all the dystrophies should include an attempt to eliminate edema in the hope of lessening the subsequent fibrosis. Usually an attempt is made to break the reflex arc either by sympathetic block or, as a last resort, by sympathectomy.[15]

The various kinds of reflex dystrophy seem designed to plague the soul of the industrial surgeon. The findings are often vague and indefinite. Although the hyperesthesia and paresthesia are not always in accord with nerve distribution and may seem to be glovelike, hysteria may not be the primary factor.[2] The reflex dystrophies are frequently associated with non-industrial ailments. To make matters worse, these conditions usually occur in persons who are emotionally unstable.

A busy surgical consultant, recognizing the neurotic background, may be tempted to underrate the complaints. The patient may be sent to a succession of consultants in various fields, and each of them may add a little to the diagnosis and treatment. This cannot but confuse the patient, who, his underlying emotional problem unrelieved, finally returns to haunt the reception room of the industrial surgeon whence he began. Gradually the complaints diminish, but severely disabling stiffness and deformity remain. Although professing no solution to the reflex dystrophy problem, the author believes that early diagnosis, together with sympathetic management by a physician who has the patient's confidence, will prevent some of the disability.

Whiplash Injury

Whiplash injury is caused by violent hyperextension of the cervical spine followed by violent hyperflexion. The occupant of an automobile may receive injury of this kind when the car in which he is riding is struck from behind by another car.

The typical symptoms include neck pain and stiffness, with occipital pain which may radiate to the frontal region and to the eyes.[2] These symptoms may be associated with dizziness, faintness and vague vasomotor phenomena. The symptoms, while seemingly bizarre, do form a very definite pattern which is observed repeatedly. The symptoms are hard to explain. Question often arises as to whether or not the patient is actually disabled. Muscle spasm if present may be the only objective finding. X-ray examination may detect muscle spasm that cannot be observed otherwise.

All the spinal nerves except the first and second cervical pass out from the cord through intervertebral foramina and are more or less protected from injury. Since the nerves of the first and second cervical vertebrae pass out directly between the atlas and the skull and between the atlas and the axis, they would seem to be somewhat vulnerable to injury.

The posterior ramus of the second cervical nerve continues out through the muscles of the neck to become the greater occipital nerve, and symptoms referrable to the greater occipital are common after whiplash injury.

The anterior rami of the first, second, third and fourth cervical nerves make up the cervical plexus.[6,8] Each fiber connects with the cervical sympathetic ganglion by way of the gray rami. Deep branches connect with the vagus and hypoglossal nerves, and vasomotor fibers extend to the internal and external carotid arteries. Pizon[22] stated that even slight trauma to the cervical region may bring about changes in the blood vessels, especially the vertebral artery. He expressed belief that the vertebral artery is exposed to the "stretch syndrome" produced by irritation of the sympathetic nerves.

Since there is, then, a complex nerve network located in an area that is quite vulnerable to trauma, it seems probable that many of the bizarre symptoms associated with whiplash injury do have a definite organic basis.

Symptoms referrable to whiplash usually clear up within a year or 18 months, leaving little if any permanent disability. Heat and cervical traction seem to help in some cases.

Since whiplash injury may be confused with arthritis of the cervical spine or with injury to the cervical discs, the advice of a neurologist is usually indicated.

The term whiplash injury is frequently misused. Many trivial cervical sprains are spoken of as whiplash injuries and fantastic claims of disability are not uncommon. On the other hand, some attorneys, some general physicians and even some neurosurgeons seem to feel that every person claiming whiplash injury is a malingerer. Considerable study is being given to this problem, and it is hoped that a more scientific explanation for the bizarre complaints will be found.

Tenosynovitis

The kind of tenosynovitis most frequently observed by industrial physicians involves the extensor tendons of the thumb and wrist. The condition may follow any excessive gripping action. Knot- and even very light repetitive motion may be the cause. In early stages there may be no objective symptoms and the condition is often diagnosed as arthritis or neuritis.[11]

If the patient immediately ceases the offending activity, quick recovery is the rule. But if tenosynovitis is permitted to develop until objective findings are unmistakably present, it will probably be too late to prevent prolonged disability. Even at this stage, however, immobilization in a cast may be all that is necessary. Heat and diathermy seem to aggravate the condition. If severe symptoms persist over a month, surgical splitting of the involved tendon sheath should be considered.[11,12]

The problem is primarily one of early diagnosis, which is made on the basis of the history and the complaint of pain when the involved tendon is subjected to stretching. If the patient is a woman—and most patients with this disease are—she will almost always complain that she "drops things." If the tendons of the abductor policis longus and extensor policis brevis are involved, Finkelstein's test[13] is of great value. In this test the patient clenches the fist over the thumb while the examiner forces the wrist sharply into ulnar deviation. Complaint of sharp pain when this is done is practically diagnostic.

Although in most cases it is tendons in the upper extremities that are affected, sometimes tenosynovitis of the sheaths of the peroneal tendon follows ankle injury. In most such cases observed by the author, there was prolonged disability until someone along the line finally made the diagnosis. Usually in tenosynovitis that is sequel to injury of the ankle there is a sharply defined tender swelling just below and behind the lateral malleolus.[19]

Epicondylitis (tennis elbow)

In this condition there is usually tenderness in and around the epicondyle. The complaint of pain on extension of the elbow while the wrist is flexed is a valuable sign. There are seldom any objective findings.

The exact nature of the lesion of epicondylitis is not known.[25] It probably consists of fascio-periostitis[2] together with a partial tear of the fibers of the conjoined tendon at its point of origin near the epicondyle. The extensor carpi radialis is said to be commonly involved.[25] A much less common variation, with much the same symptoms, results from a bursitis of the radio-humeral bursa.[25]

Treatment of early cases consists of rest and avoidance of the work that brought the condition on. Later if symptoms persist, procaine injection may be tried, but usually this does not help much. Severe cases are probably best treated by converting the partial tear into a complete tear, either by manipulation or by surgical operation. The author knows of one orthopedist who simply injects procaine into the painful area and then instructs the patient to use the wrist and forearm vigorously. The results seem to be better than those obtained by other means.

Acoustic Trauma

The loss of hearing resulting from noise is becoming more and more an industrial problem. The deafness is of the "nerve type" and the high frequency ranges of the sound spectrum are involved first. If associated with a history of noise exposure, diminished hearing acuity of sounds above 4000 cycles per second is strongly suggestive of acoustic trauma. The hearing loss due to the aging process (presbycussis) also is in the high frequencies.

Often in industrial cases of diminished acuity of hearing there have been no pre-employment audiograms and it is impossible to determine just what portion of the hearing loss is the responsibility of the present employer. Hence, pre-employment audiograms are advisable if there is a noise exposure. In some respects the acoustic trauma problem is similar to the silicosis problem, in that a succession of employers may be involved. The services of an otologist are always needed in dealing with such cases. The industrial surgeon, however, may be able to detect early cases and prevent the continuance of dangerous exposure.

Acute Coronary Occlusion

There are two entirely different schools of thought regarding the relationship of acute coronary occlusion to effort and to strain. Most authorities agree that in most cases coronary occlusion is a result of the natural progression of coronary disease.[7,9,10,18] Other investigators believe, however, that in some cases exertion and strain do precipitate the attack.[1,7,9,20,21,23,24,27] A few physicians seem to feel that exertion and strain play little or no part in acute coronary occlusion.[16,17] It seems doubtful, however, that even they would advise a patient with advanced coronary disease to do strenuous work.

Attorneys for injured workmen and attorneys for employers alike soon become very adept in choosing internists and cardiologists whose opinions, while perfectly honestly given, do nevertheless support their clients' contentions.

The picture of a workman collapsing from a heart attack during strenuous work is very impressive to most laymen. In many cases courts and boards reviewing compensation claims seem to have ignored the fact that every case of heart disease is different from any other. They seem to have been inclined to oversimplify the multitude of medical problems involved and to have based their decisions largely on time relationship and on the precedent of past decisions. If litigation does not begin until months or even years after the attack the details of events immediately preceding the attack are often vague. The more complete the history in these cases the more correct the final evaluation will be. Autopsy reports are usually helpful.

Rules against the hiring of persons with heart disease are not necessarily the answer to the problem as it affects employers. For one thing, making such rules would deprive employers of many highly skilled workers; and, for another, it cannot be overlooked that in most cases in which compensable cardiac disability is claimed, the attack occurs in a person who previously had, supposedly, normal heart. A well managed job placement program based on accurate medical evaluation of the ability to work is advisable, not only because it would enable many highly skilled men to safely return to work, but in the event compensation is claimed on the basis of cardiac damage, the adjudicating commission or board will have sound data for making a correct apportionment of disability.

California Industrial Accident Commission, 965 Mission Street, San Francisco 3.

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Dishware as a Possible Source of Lead Poisoning

ALVIN R. LEONARD, *M.D.*, and GLENN LYNCH, *B.S., M.P.H.*, Berkeley

• In January, 1958, Public Health officials encountered a potentially significant source of exposure to lead in the form of improperly glazed imported dishware. Upon exposure to low-acid foods, the lead in the glazes of these dishes went into solution and could be ingested. Information on the distribution of such dishes indicates that many are probably still in use in homes and eating establishments and in some areas may still be on the commercial market.

LEAD POISONING as an occupational disease has been of classic interest to the medical profession; and in recent years attention has been paid to the phenomenon of lead poisoning in children. Bradley and Bessman,[2] and Greenberg[3] pointed out the relation between lead poisoning in children, pica and substandard housing. The Bradley-Bessman study, for example, indicated that 44.4 per cent of children in the low income area of Baltimore had abnormal blood lead values and Greenberg[3] said that in New York City between 1950 and 1957 there were 416 cases of lead poisoning in children—60 per cent of them reported from three hospitals where members of the staff were particularly interested in the condition. The cause of poisoning in many of these cases was stated to be the ingestion of bits and flakes of lead paint that was peeling from the walls of old and dilapidated dwellings.

Recently in California another potential source of lead poisoning was noted. In January 1958, the Berkeley City Department of Public Health was informed by a housewife that some applesauce which had been placed in a heavy, ornate, imported oriental bowl removed a significant portion of pigment on the interior surface of the bowl. The applesauce had been refrigerated in the bowl for approximately five days before the fading of pigment had been noted by the housewife. The bowl and samples of other dishes, as yet unused, were obtained from the woman and submitted to the laboratory of the California State Department of Public Health for qualitative and quantitative analysis of the pigment.

Preliminary study indicated that the glaze was readily soluble in a 10 per cent nitric acid solution. On spectrographic analysis the glaze was found to contain 12.5 per cent lead but subsequent polarographic analysis gave a result of 26.2 per cent lead. The finding of 26.2 per cent was substantiated by a gravimetric technique, and this is believed to be the correct amount, since the spectograph is intended for the detection of minute quantities and is not appropriate nor accurate in measuring the relatively large amounts found on these dishes. The laboratory estimated that the total amount of lead per dish would be in the range of 800 to 1000 milligrams, which is well above the acute toxic dose. Results of examination of the first of a series of representative samples were as follows:

Sample	*Coating Adhesion*	*% Lead in Coating*
Chop Suey Bowl	Very loose	26.2
Chop Suey Bowl	Very loose	25.0
8-inch Green Bowl	Tight	16.1
8-inch Blue Bowl	Tight	19.8
8-inch Yellow Bowl	Very tight	< 5
6-inch Plate	Very loose	27.5
8-inch Plate	Very loose	28.9
10-inch Plate	Very loose	28.5
6-inch Green Bowl	Very loose	19.6
8-inch Yellow Bowl	Tight	32.2
6-inch Green Bowl	Very tight	11.8
6-inch Yellow Bowl	Moderate	2.5

It will be noted that there is considerable variance in the adhesive quality of the pigmented coating among the different utensils. Practically all dishes contain a lead glaze but when the dish is properly fired this glaze is firmly adherent to the dish and there is no possibility of the lead going into solution. With improperly fired dishware, however, the lead glaze may be only loosely adherent and may be easily dissolved by a weak acid solution. This seemed to be the case with the dishes under consideration.

Because of the possibility of a serious public health hazard the Berkeley City Department of Public Health made a public announcement of its findings and issued a public warning regarding these dishes. The State Department of Public Health subsequently notified all local Departments of Public Health in California of this situation. Following these public announcements numerous reports from people owning similar dishes were received, and many persons reported the fading of pigment when their dishes were exposed to acid foods. Investigation revealed that these dishes were of the same type and manufacture as the ones originally studied, and the fading was produced by such common foods as applesauce, Jello, salads and citrus fruits. At first

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From the Berkeley City Department of Public Health, Berkeley 3.
Submitted July 1, 1958.

all the reports that were investigated involved utensils bearing a similar identification mark (Figure 1).

One family reporting such an observation consisted of a husband and wife. The woman was under medical care for vague abdominal distress; and when the family reported using one of the suspect utensils the question of possible lead intoxication was raised. The urine of both was found to contain lead some ten days after exposure from the bowls had ceased—that of the husband containing 0.072 mg. per liter and of the wife 0.094 mg. per liter. Both these values are above the normal range for persons with no particular source of lead exposure and approximate the "normal" range for workers with an occupational exposure to lead. The test was repeated eight days later and the husband's urine then contained 0.068 mg. and the wife's 0.037 mg. per liter. In neither case was there stippling of the red blood cells or a lead line and the attending physician did not feel the symptoms were due to lead poisoning. The findings, however, do indicate that in both these persons there was a source of exposure to lead above that of the general population.

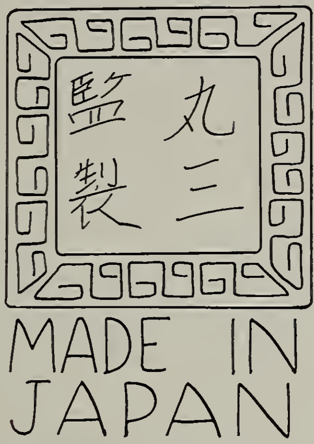

Figure 1. Identification mark on dishware involved in investigation of lead content.

Bits of information regarding the manufacture, source and distribution of these dishes were obtained during the investigation. As far as could be determined a large shipment of bowls, plates, dishes and saucers arrived in this country from Japan in the fall of 1955. The tracing of invoices and purchase orders suggested that the shipment arrived in San Francisco and was distributed to a large number of importers and wholesalers in that area, and from there was distributed on a nation-wide basis. In the San Francisco Bay Area the dishes were distributed through oriental art stores, hardware stores, art shops, novelty shops, super-markets and ten cent stores. Many were distributed to restaurants. They were relatively inexpensive and apparently quite popular.

The Japanese Trade Center and the Japanese Consul General Office in San Francisco launched an immediate investigation when the laboratory data were reported to them. A news release dated February 7 from Tokyo[1] reported Kimiyo Yamomoto, chief of Japan's Pottery Federation, as stating that the dishware in question, "may be those which were discovered poisonous in Japan and banned about four years ago. They were collected and destroyed at that time but some may have been shipped to the United States."

More recent findings have revealed that other dishes which do not bear an identifying label but are similar in appearance have soluble pigmented glazes containing large amounts of lead. A recent analysis was made of four chop suey bowls of 6″ and 8″ diameter on which there was no manufacturer's trade mark. These dishes were tested by placing 40 to 50 ml. of distilled vinegar in them for 24 hours and then analyzing the vinegar for lead content.[†] The results were as follows:

Sample No.	*Volume of Distilled Vinegar (ml.)*	*Total Lead Content (mg.) in Volume*
1	40	5.4
2	50	0.6
3	47	0.2
4	45	0.6

Even though the vinegar in these cases contained significant amounts of lead after it had stood in the dishes there was no perceptible evidence of fading of the pigment although it is probable that prolonged exposure or a stronger acid would cause fading.

DISCUSSION

The foregoing information suggests that the general population may have a significant source of exposure to lead which has not been previously considered. There is reason to conjecture that lead poisoning, mild or moderate, may be occurring with greater frequency than is suspected. Since this disease may involve the gastrointestinal system, the blood-forming organs or the nervous system, the symptoms may be protean and the physician should maintain a high index of suspicion. As Greenberg[3] pointed out, the disease is not uncommon in children and the bulk of cases have been reported from institutions where the staff has been particularly interested in it.

Kanner,[4] in discussing lead encephalopathy, said: "Regulation of the lead content of many articles to which children are exposed is one of the sloppiest chapters of public hygiene. The fact that most case reports of lead poisoning have come from the United States and Japan may, of course, mean that American and Japanese physicians have made the diagnosis more readily than others. But it may also mean that the laws of the two areas have been woefully negligent in their duty to eliminate a major hazard to children's physical health."

[†] Normally distilled vinegar contains considerably less than 0.01 mg. per 50 ml.

Osborne[5] recently reported a family episode of lead poisoning involving a three-and-a-half-year-old child who died and the child's mother and two-year-old brother who had high content of lead in the blood. The source of this outbreak is as yet unknown.

The California State Department of Public Health reported the following morbidity data on infectious encephalitis[6]:

	1955	*1956*	*1957*
Total cases	415	558	511
Western Equine	6	14	3
St. Louis	3	7	23
Undetermined	127	197	159
Mumps	181	253	186
Other*	98	87	140

It is noteworthy that during the past three years approximately one-third of all reported cases of encephalitis in California are of unknown origin. It is also interesting to speculate how many of these cases might, in fact, be due to undiagnosed lead poisoning, and whether or not such lead poisoning, if it is occurring, might be due to the use of dishes not properly glazed. It is hoped that this report will alert practicing physicians to consider the possibility of lead poisoning in the differential diagnosis of gastrointestinal and neurological disturbances, and to make such cases known to their local health departments.

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*"Other" included measles, chickenpox, influenza, herpes simplex and pertussis.

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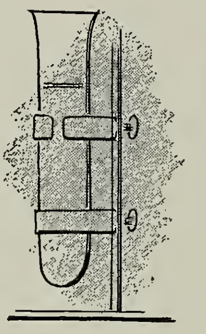

Tranquilizing Agents

Some Problems in Evaluating Them

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• Evaluation of tranquilizing drugs is more difficult by any technique than evaluation of drugs given for purely organic effect, since both the symptom and its evidences are conditioned by profound psychic values. Difficult as it is to match psychiatric patients as controls, it is equally difficult to use each patient as his own control, since his reaction either to drug or to placebo may be strongly affected by previous experience with the other dose or with other drugs.

In a "double blind, double cross" test comparing the values of prochlorperazine and phenobarbital, the controller misled the observers by maintaining the same drug for each patient during the entire test period. The observers detected that the test was not going according to plan, and when the "double cross" was revealed they were able to guess fairly well which patients had received each drug. The experiment not only sharpened their future observation, but demonstrated the reliability of trained clinical judgment in evaluating drugs when bias is eliminated.

IN EVALUATING NEW DRUGS by the double blind technique, certain sources of error arise even in patients with organic diseases. When emotional illnesses are investigated, these same factors are magnified sometimes to the point of invalidating the results.

The patient himself reacts to a placebo according to the psychologic value it has for him. Beecher[2] said he suspects that the anxious, labile, immature person probably responds strongly to a placebo. The opposite type—withdrawn, regressed, chronically psychotic—might not be expected to be influenced by the offering of a medication; but his symbolic interpretation of this act may have a stronger impact than it has in a nonpsychotic person. Ideally, for test purposes the patient should be unaware that he is being treated, and Hoch[5] suggested that some drugs might be incorporated into patients' food. It is sometimes assumed that if a patient has been hospitalized for decades his level of disturbance is fixed and his behavior established; but there can be a substantial variation due to psychodynamic events not always evident to the examiner. Hence the difficulty of matching control and treated groups. Although data as to age, sex, diagnosis and the like may be comparable, can the degree of thought fragmentation, perceptual anomalies and ego strength be equated?

On the other hand, the patient cannot well serve as his own control. If the drug is given first, its physical effect may linger long after it has been discontinued, and the placebo will appear to have evoked a similar improvement. Especially in milder depressions and anxiety reactions, the sustained benefit observed after brief treatment may be due to restoration of a psychic balance that sustains itself thereafter. It is sometimes forgotten that the placebo was used therapeutically long before it became a testing device. If the patient associates relief of tension with tablets of a certain color and form, he may be conditioned to such relief—and experience it—even after inert ingredients have been substituted for the drug. Conversely, if the placebo has not produced symptomatic benefit, may not the active preparation of similar appearance have to overcome a negative conditioning?

This negative attitude may express itself very simply in the avoidance of medication. Eiduson[3] recently reported a case in which only urinalysis disclosed that, despite careful supervision by nurses, a patient was not taking chlorpromazine tablets as prescribed. Given the drug in liquid form, he excreted phenothiazines normally.

A double blind test may not remain blind very long; this has been true of most studies on tranquilizing drugs. The side effects soon identify the drug for the attendants, and even for some of the patients. It may even be in some instances that the drug and the placebo are not alike externally. Baker[1] found that a placebo was more effective in reducing the incontinence of deteriorated psychotic patients than was mepazine (Pacatal®). Baker concluded that the sweet-tasting placebo, as opposed to the bitter-tasting drug, was accepted as a token of friendliness or as a reward for continence.

Just as new drugs for the treatment of congestive heart failure are measured against digitalis leaf rather than a placebo, it would seem rational to

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measure the ataractic agents against the time honored daytime sedative, phenobarbital. Two advantages are apparent: Some of the minor side effects are identical and unblinding may be avoided; furthermore, the superiority, if any, of the tranquilizer group over the sedatives will be demonstrated.

Some investigations have been handicapped by a rigidity of dosage schedule. To do an elaborate study without making provisions for flexibility in the amounts of medication given to each patient is as irrational as studying the response of an unselected group of diabetics to 40 units of insulin daily. The hazards of overdosage for some and the inffectiveness of underdosage for others make it impossible to draw conclusions that have any practical application.

OBSERVERS' BIAS

Perhaps the major source of error in clinical psychopharmacologic studies lies with the evaluators. Personal bias for or against a drug or drug therapy in general has been a source of conflicting reports. In Feldman's[4] study a number of physicians evaluated the response of relatively similar patients to chlorpromazine. The degree of improvement noted varied from 10 per cent to 77 per cent and correlated well with the physician's acceptance or rejection of the concept of drug treatment for psychiatric disorders. Just as the enthusiasm of the earlier studies may have been transmitted to the patient with a positive therapeutic impact, one may wonder whether the current skepticism has antitherapeutic resonance. In dealing with patients whose illness can be defined in terms of distorted interpersonal relationships, their sensitivity to the investigator's unspoken feelings can be phenomenal. A project might be designed in which the evaluators are completely "blind"—that is, they would be unaware what therapeutic modality was being studied, or, indeed, that any regulation of the patient's condition was being attempted at that time.

Unfortunately, such objective end-points as those by which therapy is measured in other specialties, hardly exist in psychiatry. Not infrequently the machines of psychiatry—the available electronic devices, the measurements of autonomic or neurochemical function, and the performance tests—are used to determine drug activity. However, these measurements subtend minute areas of human personality, and generalizations from them to the factors of real importance seem less than satisfactory. Efforts to make results "objective" through the use of batteries of psychological tests have not been too helpful. This is not surprising when it is recognized that even much more drastic therapeutic approaches, such as lobotomy or electroshock, can barely be demonstrated to change the pattern of projective test material. The many rating scales are helpful, but it must be remembered that they are still subjective estimates. The final score is a number, but one derived from introspective evaluation. At present, serial descriptive reports, by skilled observers with minimal emotional investment in drug therapy who are thoroughly acquainted with their patients, seem as reliable as any other measure of drug effect.

"DOUBLE CROSS" TECHNIQUE

In an attempt to reduce observer bias, the author and his associates have used a variation of the double blind technique. This modification might be called the "double blind, double cross" method. A study of a group of 30 psychotic females with anxiety or hyperactivity was planned so that alternate courses of prochlorperazine (Compazine®) and phenobarbital on a random basis were to be given. The observers believed that they were familiar with the action of the two agents and could distinguish their therapeutic activity. The study was designed so that the dosage of each drug could be raised or lowered according to the clinical requirements. It was understood that a drug would be given for a month, followed by the administration of the other drug for a like period. In order to eliminate some of the variables discussed above, the drug control physician decided to "double cross" the observers by continuing the first month's medication through the second month without change. This switch in the implicit nature of the design produced a number of agitated discussions during the second month. Comments like, "There is something wrong with the medicine," or "Let's have some of these capsules analyzed; there must be a mistake" were very revealing to the controller. One of the physicians complained that when prochlorperazine had been used before the study started, it appeared quite effective in controlling overactivity and tension, but that during the double blind period, it just was not affecting some of the patients. After revealing the "double cross," the controller asked the observers to guess which drug—prochlorperazine or phenobarbital—had been given to each patient for the entire two months. They guessed correctly in 20 of 30 cases—which is a considerably higher proportion than could be expected to occur by chance. It must be emphasized that their choice was between a tranquilizer and a sedative, not a placebo. It appears that these two types of mood-altering drugs can be differentiated by skilled observers in a clinical setting well above the chance level.

Other double crosses are theoretically possible. For example, the list of drugs might be completely revised under certain conditions. However, the double cross procedure is not to be recommended except for sporadic trial in drug studies. There appears to be no question but that when one such double cross has been revealed, a salutory effect is noted on observer judgment in subsequent investigations. There is less taken for granted. No longer is the assumption tenable, consciously or unconsciously, that if the patient was receiving Drug A this period, next period he will have to be receiving Drug B.

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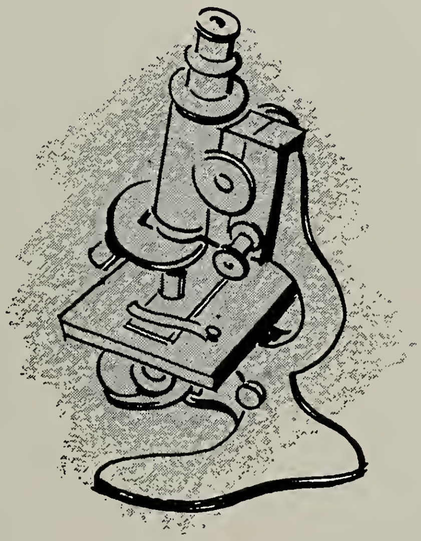

Orthovoltage Therapy

Is There Still a Need For It?

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• Since there has been no significant increase in cancer cure rates in recent years that can be attributed to the treatment method alone, new and more radical procedures have been introduced in an effort to improve the results. In radiation therapy this has taken the form of supervoltage generators and in the use of high energy sources of radiation such as Cobalt 60 and Cesium 137. As this trend gains momentum, the place and future of orthovoltage therapeutic radiation (250 to 400 kilovolts) must be considered. General agreement is that supervoltage radiation offers an increase in depth dose and fewer local and systemic reactions, but it is too early to assess any change in cure rate. Measured against this is the danger of deep tissue damage, less relative biological efficiency and increased costs.

In view of our ignorance regarding cancer, abandoning proved procedures prematurely is unjustified. The most promising trend lies in improved training and in the skillful use of what we have. While it may be that radiation of higher voltages will improve the morbidity and mortality rates, it would be better to concentrate these new modalities in centers where large numbers of cases are available.

THE DESTRUCTION of cancer by either surgical or radiological methods will remain the only successful forms of therapy for the foreseeable future. Since there has been no significant increase in cancer cure rates in recent years that can be attributed to the treatment method alone, new and more radical procedures have been introduced in an effort to improve the results. In radiation therapy, one of the most striking advances has been the great increase in the availability and use of x-ray and gamma rays at more than 1 megavolt. For this we have the resonant transformer, the Van de Graaf generator, the linear accelerator, the betatron, the synchrotron and high energy sources such as Cobalt 60 and Cesium 137. As this trend gains momentum, the place and future of orthovoltage therapeutic radiation (250-400 kilovolts) must be considered. There have been numerous articles and a few symposia on this subject, with the result that there is increasing confusion that is not limited to the nonradiologist. The purpose of this communication is to summarize the current concepts and to answer the question posed.

The fact that there is such a variety of high voltage machines should indicate that as yet the best one has not been found. It may be there will never be a best one, but that different tumor types are better treated with one form of radiation than another. It is obvious, though, that it would be technically and economically impossible for one practitioner to have all types. Each machine has its advocates, and each advocate has a more or less convincing argument for his preference.

Supervoltage radiation has been employed clinically for about 30 years. It was born in the hope of getting a beam of radiation which could deliver a high dose to a deep-seated lesion without skin damage, and of delivering a uniform dose of radiation throughout the tumor with minimal damage to surrounding normal tissues. We have reached a point where this hope has almost been achieved. The original projects, though, were abandoned. The radium bombs were dismantled. Not only were the clinical results disappointing, but the machines used were too bulky and too cumbersome for satisfactory clinical use. But they were not entirely a failure, because a vast store of information was collected and the physics of radiation in relation to dosimetry had its first real impetus. The complicated physical principles involved have now been learned, and dosimetry has been refined to a point where it hardly seems possible to refine it further. There is complete agreement that the proportion of dose that reaches the deeper structures (the so-called per cent depth dose) increases from 250 kilovolts upward, and that, as a result, smaller fields can be used; that there is less scattering with the higher voltages, which reduces the skin dose and reduces the amount of radiation outside the geometric confines of the beam; and that as a result of these factors there is less local and less system reaction. But the fulfillment of this dream is in danger of leading us only to disenchantment. The planning of therapy and the geometric configurations involved are only a small part of the total problem.

The primary consideration of all therapy is the relative radiosensitivity of the tumor, and all the admitted advantages of supervoltage do not alter

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the fact that a radioresistant tumor remains radioresistant regardless of the quality of radiation. No supervoltage apparatus will ever supplant the clinical management of a patient with cancer. The dream of the therapist is to find the means of influencing the biological response of tissues and to learn how to evaluate this response. For the most part we depend on clinical observations, and what we know we have learned by trial and error.

It becomes clear in reviewing the experiences of those who have reported their work that many investigators are confusing improved depth dose and lessened local and systemic reaction with improved statistical results, that many are influenced by whether they have supervoltage equipment, that some are interested only in the prestige value involved. The "ballyhoo" surrounding the installation of any one of the supervoltage machines is now standard procedure, including the often repeated statement that Cobalt 60 is the poor man's radium. In an environment of this type it is not strange that laymen—and many physicians—have become so impressed with supervoltage radiation that they are demanding it. The comment that withholding it from anyone may be the basis for malpractice claims, indicates the extremes this situation can reach.

To review briefly, the advantages of supervoltage over orthovoltage are: The increased depth dose, the less pronounced skin reaction, the smaller amount of normal tissue irradiated, decreased bone absorption and diminished systemic effects. However, there are certain definite and serious disadvantages and dangers. Because of the lessened skin reaction, the observation of skin reaction as a guide to therapy is no longer valid, and the possibility of overtreatment with damage to the deeper structures becomes a real hazard. A deep reaction may be substituted for a superficial one, thus losing all the potential benefits of supervoltage radiation. While the lessening of scatter results in a smaller volume of tissue being irradiated and allows for the use of a narrow beam, difficulty in determining the size or extent of the tumor, or haphazard clinical appraisal may lead to use of so narrow a beam that it does not completely encompass the lesion. All supervoltage has an increased exit dose and there is danger of producing worse reactions on the side opposite that being treated. It should be clear that high voltage radiation is a dangerous tool and can produce irreversible damage if not expertly used. Thus the poor utilization of the very characteristics which make these voltages desirable can end only in clinical failure.

Experimental evidence has indicated and clinical experience has confirmed that the relative biological effectiveness of radiation from supervoltage is less than that from 250 or 400 kilovolts. This means that in terms of practical application, in order to get the same clinical response a larger total tumor dose must be given. This usually means 7,000 to 8,000 r instead of the usual 6,000 r given with 250 kilovolts, and also a somewhat longer treatment period, which can be a limiting factor of considerable importance if the number of patients is large.

To attempt to demonstrate superiority of certain voltages statistically beclouds true progress, and it is less than realistic to compare clinical results from different institutions using different radiation sources. The futility of such observations can be illustrated by the following quotations from four leading institutions by four eminent radiologists, made during a symposium about two years ago. Cantril[1] expressed belief there was a 15 per cent increase in survival with supervoltage. Friedman[1] agreed that he had obtained a 10 per cent increase in cure rate. Guttman[1] was not certain whether or not there had been any over-all improvement, and Watson[1] was certain that there had been little if any change in survival time. It is obvious, of course, that different types of cases were involved, a different degree of selectivity and different treatment techniques. To attempt to correlate these conclusions would be difficult if not impossible, and probably meaningless.

It should be clear to everyone that supervoltage will not fulfill the optimistic expectations held out for it. Instead there is a danger that the belief that higher voltages means cure, will lead to disillusionment. We become overconfident and treat patients who should not be irradiated at all. We cannot hope to correct either the errors and failures of surgeons or of radiologists with supervoltage radiation, and we should use care in giving assurance to patients and their families that radiation with Cobalt, for example, is the universal panacea.

But while the cure rate may not be influenced by supervoltage radiation, there seems to be little doubt that there is sometimes an improvement in palliation, and that some patients are more comfortable during the course of therapy. Whether this consideration is sufficient justification for replacing existing therapy equipment or of adding supervoltage sources is the point to be decided. Is it economical or efficient to invest forty or fifty thousand dollars to treat about 10 per cent of malignant tumors, which it has been estimated make up the volume that can receive increased benefit from high voltage radiation? Although it would appear that after 30 years it should be possible to assess the value of supervoltage radiation, we are still uncertain as to the most efficient and effective type. Yet the evidence is consistent that there is some future in higher voltages, primarily because of the advantages mentioned and despite the hazards discussed. But, should it be

Cobalt 60, Cesium 137 or some form of x-ray generator?

It is apparent that a great deal of investigation is still necessary. The expense of such installations and the need for constant monitoring and maintenance makes it an unsuitable project for an individual or for small institutions. The need for further study and research and the problem of finding the best procedure for any particular lesion make it imperative that a study of this sort be carried out in centers large enough to have the volume of patients and the technical help necessary. Certainly at present the cost of equipment and lack of mobility, the expense of buildings and a shortage of trained personnel should retard the widespread use of supervoltage. At the same time, the pressures of manufacturers, hospital administrators and trustees, and sometimes the need for publicity, has resulted in the installation of numerous Cobalt units. There is real danger that these pressures and the need to justify the expenses involved may actually prevent the careful studies necessary to determine the place for this type of therapy in the field of cancer management.

The need for biological research is imperative as it becomes increasingly evident that the biological character and the extent of the disease is by far the most important factor in determining the therapeutic result. The particular radiation modality used plays a relatively minor role, while the skill, training and interest of the therapist is of major importance.

For the present, the widely used orthovoltage radiation should be continued as the backbone of radiation therapy in cancer, because there is no doubt that in competent hands the results with 250 kilovolts have been as good as any reported with supervoltage radiation. It would be unwise for any radiologist or institution, other than one prepared to assume the obligation and responsibilities associated with investigative procedures, to abandon tried and proved methods. Physicians practicing at the community level should avoid experimental procedures. What may seem valid radiation in a research center, where the large number of cases makes careful selection possible, may be quite unconscionable in other circumstances.

Our ignorance of cancer demands that we utilize what we have to the best of our ability and to stress the training of radiologists in the skillful use of the measures available.

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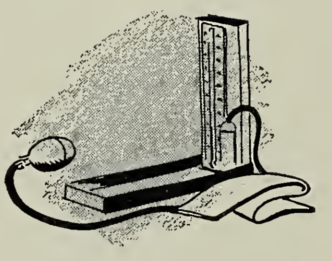

CASE REPORTS

Bronchial Asthma Due to Almond Pollen Sensitivity

LOWELL F. STEEL, M.D., Chico

ALMOND NUT EXTRACT has been available for some time for both intradermal and scratch testing for hypersensitivity. In a review of the literature, however, no report of a case of sensitivity to inhaled almond pollen was found. The purpose of the present article is to document a case of almond pollen sensitivity, to disclose a new source of inhalant antigen and to call attention to the distribution of almond acreage according to estimates by county and state totals as most recently compiled in 1956.[1]

REPORT OF A CASE

A crop appraiser, a white man 52 years of age, had severe paroxysms of cough, and shortness of breath so severe that for three weeks he had been unable to work. Illness began March 5, 1956, with sensation of having "flu"—general malaise, general aching, severe sneezing, tightness and heaviness in the chest, and dyspnea on slight exertion. As the cough increased, the patient lost 20 pounds in weight. He noted palpitation but no ankle edema and no fever. On one occasion the sputum became blood-streaked. Intermittent rawness of the throat, leg cramping and mild sweats, worse at night, occurred.

The patient had resided five years among almond trees, but his symptoms had not been relieved during a brief frost. He had not been exposed to sprays or insecticides. His home was heated by air-blower. There had been no exposure to new pets, no recent changes in household furnishings, nor any emotional stress. His wife had not changed cosmetics or soaps. Jasmine, bridal wreath, almond trees and forsythia were cultivated outside the patient's bedroom window.

The patient had undergone removal of tuberculous cervical lymph nodes when he was six years old and an operation on the nasal septum at 17 years. Physical examination in 1955 and chest roentgenograms four months before the onset of illness had disclosed no abnormality. The patient had never had allergic response to drugs, food, inhalants or insect stings. He had mild paranasal sinusitis which was not seasonal. There was no history of allergic sensitivity in his family.

When first observed he was in obvious respiratory distress with pronounced wheezing and musical chest rales audible without the stethoscope. His voice was husky and he had a frequent, non-productive dry cough. Blood pressure was 100/64 mm. of mercury. Forced chest expansion was equal bilaterally. Respirations were 22 per minute with a prolonged expiratory phase. Rales were most audible over the hiluses and the lungs were hyperresonant to percussion. Nasal passages were pale and turgid.

Leukocytes numbered 12,200 per cu. mm. with 15 per cent eosinophils. The fasting total eosinophil count on admission was 1,034 per cu. mm. (normal, 250-350). The corrected Wintrobe sedimentation rate was 33. An intermediate purified protein derivative tuberculin test gave a 2-plus positive response at 48 hours.

Allergic bronchial asthma was diagnosed. The patient was given 60 units of aqueous corticotropin intramuscularly, followed by 5 mg. of prednisolone in oral doses of 5 mg. every 6 hours. Aminophyllin, pyribenzamine cough expectorant, and isoproterenol troches were also administered. The patient responded within 48 hours, and after six days prednisolone was discontinued.

About a month later, while residing at a 5,000-foot altitude, the patient was free of symptoms. The leukocyte count returned to normal and so did the fasting eosinophil count. Antigen skin tests were made according to standard methods[4] with regional inhalants, but no significant results were obtained. Because almond pollen was suspected, samples of this pollen, collected by bees, were obtained from the Department of Pomology at the University of California College of Agriculture in Davis.* The material was prepared for intradermal and scratch testing by commercial laboratories.† Tests were made in October 1956. An initial dilution of 1:10,000 was used, and later dilutions produced the results shown in Table 1. No reaction occurred to tests done with bee antigen only.

Desensitization with extract of almond pollen was begun and the patient remained asymptomatic until the following January, when almond trees were in blossom. Onset of sneezing was followed by rhinorrhea and intermittent periorbital edema. Desensitizing doses were decreased and symptoms were relieved with antihistamine. Three months later the patient was completely asymptomatic and gaining

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Submitted April 8, 1958.

*Pollen supplied by Professor W. H. Griggs.

†Cutter Laboratories, Berkeley, and Hollister-Stier Laboratories, Los Angeles.

TABLE 1.—*Results of Antigen Testing with Bee-Collected Almond Pollen and Anthers*

Intradermal Test	Dilution	5 Minutes	15 Minutes	30 Minutes	48-Hour Induration
Pollen	1:1000	2+	2+	2+	2 cm.
Pollen and anthers	1:1000*	4+	4+	4+	4 cm.
Pollen	1:1000*	4+	4+	4+	1 cm.
Scratch test					
Pollen	1:100	2+		2+	
Pollen and anthers	1:10	1+		1+	
Pollen	1:20	4+		4+	

*Massive pseudopodia were produced.

weight; and desensitizing doses, by that time in a dilution of 1:10, were discontinued. Symptoms did not recur during the 1958 almond pollination season.

DISCUSSION

The method of obtaining pollen for testing in this case—by bee collection—may be considered in future preparation of regional antigens. The collection was obtained at Davis under well-controlled conditions during a season when other possible allergens—grasses and tree pollens—were dormant. The antigen was highly specific, representing probably no more than two out of the 45 varieties of almond grown in California. A number of other patients with respiratory tract allergic disease due to inhalant pollens have been tested with this material but without response.

Practically all the commercial almond orchards in the United States are in California. They cover approximately 88,000 acres, with Butte County having the largest acreage.

SUMMARY

A case of respiratory tract allergic reaction to almond pollen, successfully treated by desensitizing doses of the pollen, is reported. This is apparently the first reported case of sensitivity to the pollen of almond trees.

Honey bees were used to collect the pollen that was used for testing and desensitization.

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Palmar Intramural Thrombosis In the Ulnar Artery

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THE PROBLEM of pain in the hand has many origins and may be baffling. The cause may be local or distal. It may be due to trauma, infection or tumors, or to reflex changes from the chest, neck, brachial plexus, shoulder, elbow or wrist.

REPORT OF A CASE

In the present case the patient was a 37-year-old man who sought medical advice on October 7, 1957, because of a "ganglion" that had developed in the hypothenar area of the left hand while he was at work about three weeks previously. As a warehouseman, he frequently pounded with the palm of his left hand over the top of a screwdriver to open cases of merchandise. Soon after the "ganglion" appeared, prickling sensations developed in the palm of the left hand and the left little and ring fingers. In addition the patient noticed a feeling of coldness and pain in those fingers. The pain in the hand increased about a week before he was seen by the author.

The patient had had herniotomy in 1950. He had had no other illnesses, vascular disturbances or neurological disturbances before the onset of pain in the hand.

Upon examination, tenderness, coldness and blanching of the left little and ring fingers was noted, indicating impairment of vascular supply. A fluctuating firm nodular mass was palpated over the hypothenar area of the left hand. Putting pressure on the midpalmar area caused pain and tingling in the left little and ring fingers. Sensation to pinprick and touch was unimpaired. No evidence of pathologic change in the bones or joints of the left hand was seen in x-ray films.

In view of the coldness and blanching of the ring and little fingers of the hand, ulnar nerve block to remove any nerve irritation was done by injecting 1 per cent procaine solution into the ulnar notch at the elbow. This procedure did not alleviate the vasospastic blanching and coldness of the fingers, although there was some diminution of sensation. Five cubic centimeters of 1 per cent procaine solution was also injected in the tender area in the palm, without improvement in the coldness and blanching of the skin of the ring and little fingers. The next day a cervical sympathetic nerve block was carried out by injecting 30 cc. of 1 per cent procaine solution. Enophthalmos and dryness of the skin on the left side of the face occurred immediately, and there was an increase in the temperature of the left upper extremity and fingers, except for the little and ring fingers, which were only partially improved.

Presented before the Section on Orthopedics at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

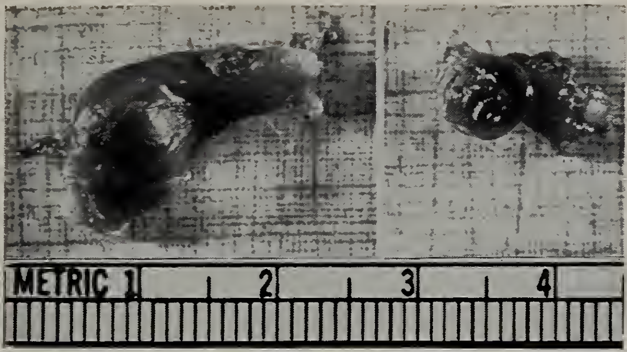

Figure 1.—*Left*, resected ulnar artery with bulge at site of intramural hematoma. *Right*, cross-section at site of bulge, showing eccentric lumen.

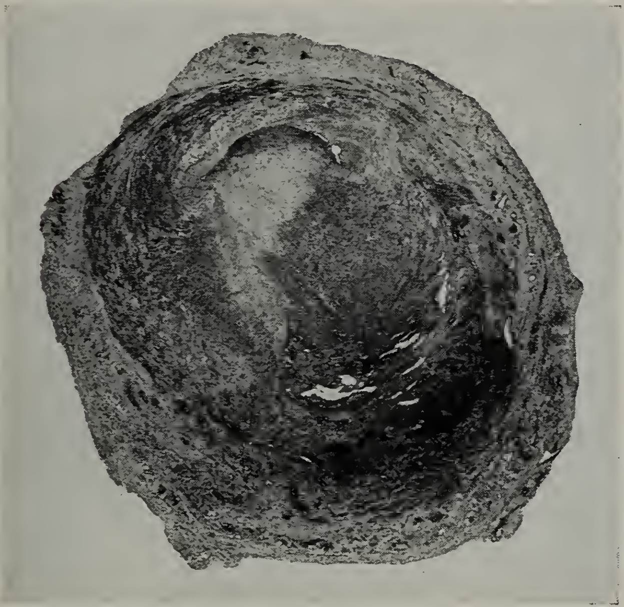

Figure 2.—Microscopic cross-section of ulnar artery, showing eccentric lumen and intramural hematoma.

The patient was then admitted to hospital for an exploration of the hypothenar area and the ganglion-like nodule there. General anesthesia was given, and a tourniquet was applied to control bleeding. A curved incision was made over the hypothenar area and the fascia and underlying muscles, vessels and nerves were exposed. The ulnar artery and nerve were in a normal position. Owing to pronounced dilatation and deformity, the ulnar artery was partially protruding through the overstretched hypothenar fascia. There were several bands of adhesions between the ulnar artery and the adjacent ulnar nerve. The ulnar nerve was movable and free of any bruising. In situ the ulnar artery at its greatest width was about 1.3 cm. in diameter, and it did not pulsate after the tourniquet was removed. It was nodular and seemed to be of cyst-like structure, which was marble-like in consistency over the site of the greatest dilatation. The ulnar artery in the palm was ligated on both sides of the node, which was then excised (Figure 1). The wound was then closed in layers and the hand immobilized in a splint for seven days. After whirlpool treatments and physiotherapy, the patient returned to his usual occupation three weeks later, all symptoms of vascular impairment in the fingers having abated.

PATHOLOGIST'S REPORT

The specimen was a section of blood vessel 2 cm. long. The diameter was 0.2 cm. at both ends, with a bulge to 0.5 cm. in the mid portion (Figure 1). The vessel and nodule were covered by connective tissue. The cut surface showed a patent lumen with an eccentrically placed organized clot within the wall of the vessel.

Microscopically observed in a cross-section of the vessel at the expanded part was an organizing thrombus with a fibrinoid clot superimposed, occluding the lumen (Figure 2). No abnormality was noted in sections of the artery distal to the enlargement. The deeper sections showed what appeared to be disruption of the internal elastic lamella with extension of the thrombus into the wall of the artery. The diagnosis was "thrombus of an artery."

SUMMARY

A case is presented in which a palmar intramural thrombus of the ulnar artery caused reflex vasospasm and pain in the adjacent ring and little fingers. The condition was easily corrected surgically.

1052 West Sixth Street, Los Angeles 17.

Bowen's Disease of the Anus

DOUGLAS K. DUNCAN, *M.D.*, San Francisco, and
PETER D. O'LOUGHLIN, *M.D.*, Milwaukee, Wisconsin

In 1912[1] and in 1915[2] Bowen described, under the title of "Precancerous Dermatoses," a type of intraepidermal squamous cell epithelioma which has subsequently borne his name. Reports of six cases of Bowen's disease of the anus were found in a review of the literature since 1942.[4,5,7,8] There is some controversy as to whether Bowen's disease is a distinct kind of skin disease or is the same as carcinoma in situ. Some investigators[3,9,12] hold that Bowen's disease is a true primary epithelial neoplasm, others[13,14] disagree. The rarity of this condition in the anal region, and the authors' opinion that Bowen's disease is a true primary epithelial neoplasm prompted the following case report.

CASE REPORT

The patient, a 50-year-old married white woman, was admitted to St. Mary's Hospital with chief complaint of itching and burning in the anal area of eight years' duration. For some six months she had noted small amounts of blood on the toilet paper and burning pain after defecation.

From the Departments of Surgery and Pathology, St. Mary's Hospital, San Francisco.

Submitted July 24, 1958.

At the five o'clock position there was a dull red patch 2.5 cm. long which extended inside the anus. In the region of the perineal body there was an area 2 x 1 cm. of what appeared to be leukoplakia.

The day after the patient was admitted the lesion in the anal region was excised as an inverted V with the apex in the rectal canal. The area of leukoplakia over the perineal body was excised with an elliptical excision and the defect primarily closed. These areas healed satisfactorily in three weeks.

The pathological report was:

"The tissue from the vulva and anus contained similar lesions which consisted of localized intraepidermal carcinomas resembling Bowen's disease. There was slight surface keratinization and regional submucosal chronic inflammatory changes. No evidence of invasion was seen. There was a margin of uninvolved tissue beyond the limits of the lesions. Mitoses were moderately frequent.

Gross Description of Bowen's Disease

Bowen's disease usually presents as a dull red patch with a sharp but irregular outline. There is little or no infiltration. Within the patch are areas of crusting, and beneath the crust a granular and oozing surface. The patch tends to spread slowly by peripheral extension and has a tendency to healing in its center.

Microscopic Description

Hypertrophy of the horny layer of the epidermis, with retention of nuclei in the stratum corneum and thickening of the germinative layer, are microscopic characteristics of the lesions of Bowen's disease. The *rete* pegs are elongated and thickened, often to such a degree that the papillae located between them are reduced to thin strands or are obliterated. (See Figures 1 and 2.) The basal layer is intact and no true invasion can be seen. Throughout the germinative layer the cells lie in complete disorder and many are atypical, with large and hyperchromatic nuclei. Multinucleated epidermal cells containing clusters of nuclei are common. Some cells may have pronounced vacuolization as in Paget cells. The intercellular bridges of these cells are preserved, however, in contrast to Paget cells, in which they are absent. A common characteristic—not always present—is individual cell keratinization in the germinative layer. Such keratinized cells are large and round and they have a homogeneous and strongly eosinophilic cytoplasm and a large irregularly shaped hyperchromatic nucleus. The upper corium usually has a moderate amount of inflammatory infiltration, chiefly of lymphocytes and plasma cells.

DISCUSSION

The original descriptions of Bowen's disease stressed the pronounced proliferation of the germinative layer accompanied by indirect cell division in which there is a division of the nuclear material without a division of cytoplasmic material. Division of this type produces a multinucleated giant cell.

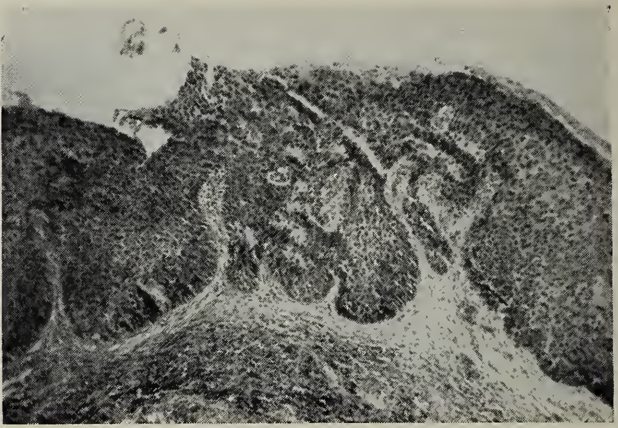

Figure 1.—Note the thickening of the epidermis, the elongation of the *rete* pegs, the intercellular edema and the inflammatory reaction in the corium. (Reduced from ×100.)

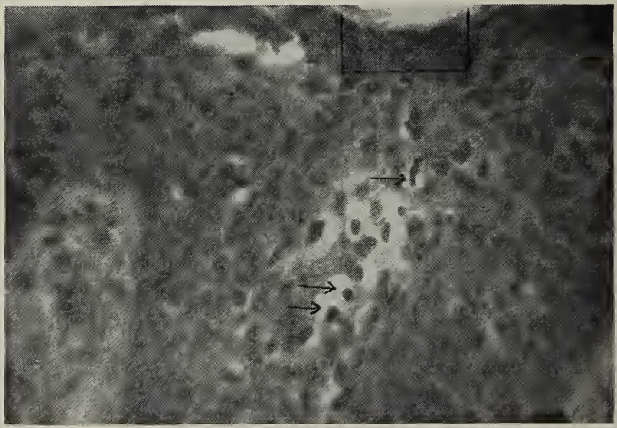

Figure 2.—The arrows point to the Bowen's cells. Some of these cells are multinucleated and have pronounced intracellular edema, producing a halo effect. The area in the square shows the retention of nuclei in the stratum corneum of the epidermis. (Reduced from ×400.)

Bowen also stressed vacuolization and degenerative changes in the epithelial cells, the complete disorder of cells in the germinative layer, and the dense infiltration of lymphocytes and plasma cells in the upper corium.

The different characteristics of Bowen's disease, Paget's disease and intraepidermal cancer, which can be quite similar both grossly and microscopically, are compared and contrasted in Table 1. The differences between the various diseases are sometimes very slight. The distinguishing features between Paget's cells and Bowen's cells are that the former possess prickles, have clumping of the nuclei within multinucleated epithelial giant cells and have individual cell keratinization.

The pronounced hyperplasia of the germinative layer without any suggestion of invasion, the presence of multinucleated cells with prominent nucleoli, the intracellular edema of the epidermal cells with resulting vacuole formations and compression of the nuclei and the inflammatory reaction in the upper corium help to distinguish Bowen's disease from

TABLE 1.—*Similarities and Differences Between Bowen's Disease, Paget's Disease and Intraepidermal Cancer*

	Bowen's	Paget's	Intraepidermal Cancer
Basic anatomic considerations	Epidermal in situ	Intraepidermal spread of cancer	Epidermal in situ
Location	Oral cavity, cervix, penis, anus, conjunctiva, upper respiratory tract, cornea, buttock	Genitals, nipple, axilla perineal area	Anywhere on skin or mucous membrane
Gross appearance	Dull red patch, irregular outline, 2 to 8 cm. in diameter	Area of dusky erythema with scaling 1 to 5 cm. in diameter	Variable appearance depending on location—irregular raised red area 1 to 6 cm. in diameter
Specific cell type	Multinucleated epidermal cell containing clusters of nuclei	Paget cell (large, light staining, devoid of prickles)	Atypical squamous epithelial cell
Hypertrophy of horny, granular prickle-cell layers (hyperkeratosis)	Pronounced	Absent	Present
Intracellular bridges	Present	Absent	Present
Individual cell keratinization (dyskeratosis)	Present	Absent	Present
Inflammatory reaction in corium	Pronounced. Lymphocytes and plasma cells	Pronounced. Lymphocytes and plasma cells	Present
Progression to invasive squamous cell carcinoma	Can remain in situ 25 years or longer. 2 per cent become invasive	Adenocarcinoma	Usually becomes invasive soon

carcinoma in situ. Carcinoma in situ does not have the typical Bowen's cell which is a multinucleated epidermal cell containing clusters of nuclei, nor does it have the same type of individual cell keratinization in the germinative layer. Bowen's disease has been described only in specific areas while carcinoma in situ can occur anywhere on skin or mucous membrane. Rarely do the lesions of Bowen's disease change to invasive squamous cell carcinoma. The dermis of Bowen's disease contains dilated capillaries and is infiltrated with lymphocytes and plasma cells, while carcinoma in situ may have the infiltrate of lymphocytes and plasma cells but usually does not have dilated capillaries in the corium.

Differentiation between intraepidermal carcinoma and Bowen's disease may at times be very difficult. Yet if Bowen's microscopic criteria are present, Bowen's disease of the anus can be distinguished from an intraepidermal carcinoma of the anus.

SUMMARY

A case of Bowen's disease of the anus treated successfully by local excision is described and the pertinent literature discussed. In reviewing the literature on the different skin diseases which resemble Bowen's disease considerable confusion as to the exact diagnosis in individual cases was noted. This report contains a table in which the similarities of Bowen's disease, Paget's disease and intraepidermal cancer are compared and contrasted.

2000 Van Ness Avenue, San Francisco 17 (Duncan).

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EDITORIAL

Physicians and Politics

California, and the entire nation, last month witnessed a general election which has caused many physicians, among others, to reconsider their own political and social points of view.

Over the Republican protest that a "New Deal" was again trying to establish itself in the state and the nation, the Democratic party proceeded to elect its members into majority positions in both state and federal legislative bodies.

Whether or not the give-away philosophy which so many medical men decry will prevail, time alone can tell. It is obvious in our own state that financial stringency will be bound to intrude into any programs of public generosity which must be financed out of new sources of taxation.

Regardless of the outcome of the voting, this would appear to be a good occasion for reminding the physicians of this great commonwealth of their privileges, responsibilities and limitations in political campaigns—as individuals and, in some regards, as members of a medical association.

First of all, the California Medical Association is a non-partisan, non-political body. Its membership includes adherents of all recognized political parties. The practice of medicine is not one of political partisanship.

Second, the right of all individuals to express their personal political opinions is recognized by the Constitution of the United States in the guarantee to all citizens of the right of free speech.

The right to communicate with public officials is reserved to all citizens under the state and federal constitutional provisions guaranteeing the right to petition. Under this right any citizen has the privilege of requesting his legislative representatives to vote one way or the other on any legislative proposal.

Under these constitutional guarantees, all physicians, as well as their neighbors, are given ample opportunity to voice their opinions to their duly elected representatives in the state or federal legislative bodies.

On the opposite side of the coin, citizens are definitely bound by laws as to what they may not do in legislative matters. They may not attempt to pledge a candidate for office as to his vote for or against a specific piece of legislation. They may not bribe, or attempt by menace, deceit, suppression of truth, or any corrupt means to influence the vote of an elected official for or against a specific proposal. They may not, by coercion or similar means, assume the position of counting in advance a vote for or against a particular legislative measure.

The California Medical Association has long been aware of both the privileges and prohibitions of citizenship and of organizations of citizens. The Association has held itself aloof from party, from candidates and from all ballot propositions which do not directly affect the public health or the practice of medicine.

The Association has long recognized the difference between proposals which appeal to physicians as citizens and those which concern them as guardians of the public health. A stand may be taken by the Association only on proposals of the latter kind and only as they affect all physicians on an equal basis, not as party members or proponents or opponents of a specific issue.

The California Medical Association, like other professional associations, maintains within itself a system of government by which it arrives at the position the Association will take officially.

A Committee on Legislation functions throughout the year as a key committee under the Commission on Public Policy. This committee, in turn, works very closely with the Public Health League of California, which maintains expert professional representatives in Sacramento during legislative sessions.

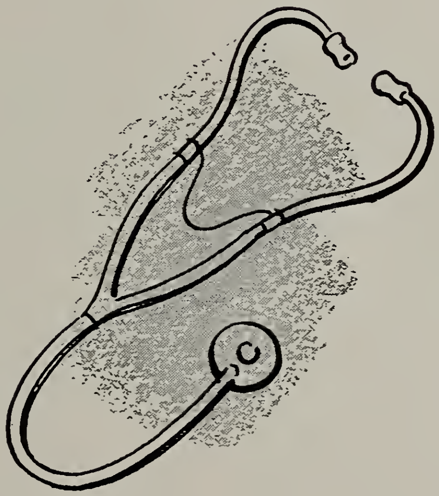
The Public Health League of California is nonpartisan and is not a policy-making body. It voices in accordance with the decisions of the respective professional organizations encompassed by its activities. In the case of the California Medical Association, the Public Health League and the CMA Committee on Legislation seek the advice of the Council before taking a position on any legislation proposed in the state capitol.

Deviation from this clear-cut channel of communication has caused the officials of the Association considerable concern, especially during the trying and competitive political campaigns just ended. The Council is now requesting all the official bodies within the Association to follow the fixed form for arriving at an expression of the Association's position when public policy is involved.

The Council at the same time is making clear to all concerned that legislative proposals by any member, committee, group or other combination will always be given careful consideration. If a proposal appears to merit the taking of an official position, the Council can decide on that point.

The stature of the medical profession increases or decreases in the public mind in proportion to the objectivity and public interest displayed by its official policies and representatives. Over a long period of years, the profession's position has been maintained on a very high plane.

Members of the Association should consider this standing before implying Association support of their points of view. Members should also remember that the profession may prosper in the political climate only if it represents a true objective point of view.



California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 441st Meeting of the Council, San Francisco, Mark Hopkins Hotel, October 11, 1958.

The meeting was called to order by Chairman Lum in the Mark Hopkins Hotel, San Francisco, on Saturday, October 11, 1958, at 9:30 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron and Councilors MacLaggan, Todd, O'Neill, Kirchner, O'Connor, Davis, Sherman, Lum, Bostick and Teall. Absent for cause, secretary Daniels, editor Wilbur and Councilors Wheeler, Foster, Shaw, Pearman and Harrington.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Clancy, Gillette, Collins, Marvin and Whelan of CMA staff; Messrs. Hassard and Huber of legal counsel; Messrs. Read and Salisbury of the Public Health League of California; county society executives Scheuber of Alameda-Contra Costa, Jensen of Fresno, Geisert of Kern, Field and Rosenow of Los Angeles, Foster of Sacramento, Donmyer of San Bernardino, Nute of San Diego, Neick of San Francisco, Thompson of San Joaquin, Donovan of Santa Clara and Dermott of Sonoma; Doctor Malcolm Merrill, State Director of Public Health; Doctor Marshall Porter, State Director of Mental Hygiene; Doctor John Keye of the State Department of Social Welfare; Doctor A. E. Larsen and Mr. Richard Lyon of California Physicians' Service; and Doctors Donald Cass, Wayne Pollock, Roberta Fenlon, Edgar Wayburn, Allen T. Hinman, Malcolm S. Watts and Ralph Gampell.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 440th meeting of the Council, held September 14, 1958, were amended and approved.

2. *Membership:*

(a) A report of membership as of October 9, 1958, was presented and ordered filed.

(b) On motion duly made and seconded in each instance, nine applicants were voted associate membership. These were: Seymour Dayton, Lucien B. Guze, Joseph K. Indenbaum, Sherwood Perry Miller, Robert A. Nordyke, Theodore Shohl, Charles E. Townsend, Glenn Allan Young, Los Angeles County; Lowell Emmons, San Joaquin County.

(c) On motion duly made and seconded in each instance, seven applicants were voted Retired Membership. These were: Miriam Pool Huff, Alameda-Contra Costa; W. G. Milholland, Fresno County; J. Tracy Bennett, Carl R. Howson, Vahan Pampaian, Ian D. Tiedemann, Los Angeles County; R. W. Homer, Ventura County.

(d) On motion duly made and seconded in each instance, ten members were granted reductions of dues because of illness or postgraduate study.

3. *Financial:*

(a) A report of bank balances as of October 9, 1958, was presented and ordered filed.

(b) On motion duly made and seconded, it was voted to sell, at cost, to the Trustees of the California Medical Association, a non-profit corporation, a note held by the Association, issued by a blood bank.

4. *State Department of Public Health:*

Doctor Malcolm Merrill reported on a conference held with the Conference of Local Health Officers, at which considerable time was spent on a discus-

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sion of the health needs of children of disorganized families.

Doctor Merrill also reported that a one-week conference on alcoholism would be held and that his department's budget for 1959-1960 would include items for further studies in the fields of radiation and air pollution.

5. *Commission on Medical Service:*

A communication from Doctor Frank J. Cox was read, in which he asked if the Committee on Fees should interest itself in fee schedules adopted for local use by county medical societies. On motion duly made and seconded, it was voted that the Commission on Medical Services be advised that its Committee on Fees should keep itself informed on any proposed local schedule of fees and be prepared to give advice and assistance to any constituent medical association on request; statewide schedules of fees remain subject to procedures already in use.

6. *Resignation of Secretary Daniels:*

Chairman Lum read a letter from Doctor Albert C. Daniels, in which he tendered his resignation as Secretary of the Association because of his inability to devote to this office the time he felt was necessary. On motion duly made and seconded, it was voted to ask legal counsel to prepare By-Law amendments which would separate the office of Secretary from that of Chairman of the Committee on Scientific Work.

7. *Annual Session:*

(a) Doctor Allen T. Hinman, a member of the Committee on Scientific Work, proposed that arrangements be made during the 1959 Annual Session for members to visit the atomic energy plant of General Electric Co. at Vallecitos, Calif. On motion duly made and seconded, it was voted to approve this proposal.

(b) On motion duly made and seconded, it was voted to present Doctor Arthur E. Smith with a plaque in recognition of his valuable services in presenting motion picture programs at annual sessions for a number of years.

8. *Committee on Nominations:*

Councilor Bostick proposed that Doctors Robert J. McNeil and James V. McNulty, both of Los Angeles, be appointed members of the Committee on Adoptions. On motion duly made and seconded, it was voted to approve these nominations.

9. *Committee on Industrial Health:*

Discussion was held on a request for the advance of about $500 to prepare drawings and cuts for a new edition of the book "Evaluation of Industrial Disability" which was published several years ago by the Oxford Press under auspices of the Association. On motion duly made and seconded, it was voted to make this advance.

10. *Woman's Auxiliary:*

Doctor Sherman reported on his meeting with the Board of Directors of the Woman's Auxiliary, at which time he moderated a panel discussion which included Robert L. Thomas and Ed Clancy as panelists.

On motion duly made and seconded, the following resolution was adopted:

WHEREAS, the Heller report recommended a closer liaison with the Woman's Auxiliary to the California Medical Association; and

WHEREAS, the special Council committee on the Heller report endorsed this recommendation and urged that the Auxiliary be made to feel more a part of the Association in its activities; and

WHEREAS, this recommendation was endorsed by the Council; therefore, be it

Resolved: That this Council urge all county medical societies to encourage the formation of countywide auxiliaries; and be it further

Resolved: That all physician members of the CMA be encouraged to urge their wives' participation in the Auxiliary and its activities; and be it further

Resolved: That the Annual Reception honoring the President's wife also honor the President of the Woman's Auxiliary to the California Medical Association.

11. *Public Relations:*

Mr. Clancy distributed copies of a new pamphlet containing the report made at an earlier meeting by Doctor Malcolm Watts, chairman of the Committee on Public Relations, encompassing an action program of public relations. It is hoped to achieve a widespread distribution of this report.

Mr. Clancy also reported on a meeting held between representatives of the Association and of the Alameda-Contra Costa Medical Association and staff members of a hospital who had requested assistance.

12. *Legal Department:*

Mr. Hassard reported that an appeal has been taken by a physician who was denied staff privileges in a district hospital. The trial court held that the denial was proper and that the hospital, even though publicly owned, had the right to maintain standards for staff admission so long as such standards were equitable and not capricious or discriminatory. Mr. Hassard asked authority to have the Association appear as *amicus curiae* in the appeal, the cost to be only the cost of printing briefs. On motion duly made and seconded, this authority was voted.

Mr. Hassard also reported that Doctor Dan O. Kilroy, chairman of the Committee on Legislation, had been asked by a joint committee on taxation of the State Legislature to discuss the equity of various tax adjustments under discussion in legislative circles. He reported proposals have been made to the Committee for prolonged medical expense deductions and Jenkins-Keough type relief for self-employed taxpayers.

13. *President's Report:*

President West reported on recent meetings he had attended with Santa Monica physicians and with the Woman's Auxiliary. He also presented letters he had received from two county medical societies which were critical of the Association in its handling of recent news stories relating to a committee activity. On motion duly made and seconded, a proposed reply to one of these societies was approved and agreement reached that a similar reply be drafted to the other.

14. *President-Elect's Report:*

President-Elect Reynolds reported on his recent visits to a number of county societies and stated that interest had been shown in the public welfare medical assistance program. It was brought out that changes in the program may be possible when the State Legislature meets in January, 1959.

15. *Medical-Legal Seminar:*

Councilor Davis introduced Doctor Ralph Gampell, a physician who last year completed a law course and was admitted to the bar. Doctor Gampell announced, for the information of the Council, that he has been appointed by the Stanford Law School to conduct a seminar in medical-legal problems and that he is hopeful that similar courses may later be established in the medical school.

16. *California Physicians' Service:*

Doctor Heron reported that administrative revamping in CPS has already resulted in considerable savings and that CPS has been operating with a surplus in recent months. He also reported that about 5,000 persons have been enrolled under individual contracts in Los Angeles County under the $7,200 income ceiling using the CPS "C" schedule.

17. *State Department of Mental Hygiene:*

Doctor Marshall Porter, State Director of Mental Hygiene, reiterated his earlier approval of the Short-Doyle program for establishing community mental health centers as a means of relieving state hospitals of a part of their case load. For the 1960 fiscal year, he stated, his department will ask for additional funds to provide more adequate mental care in the state hospitals as a means of securing more adequate and more rapid discharge of patients.

18. *State Department of Social Welfare:*

Discussion was held on the public welfare medical assistance program. Councilor Sherman reported that the liaison committee to the State Department of Social Welfare had met with representatives of the Santa Clara County Medical Society and that the society's proposed plan of indemnity payments to welfare recipients had been withdrawn temporarily pending further clarification of details.

Doctor Sherman also reported that funds for the program for the needy aged were being rapidly depleted and funds for the aid to the needy blind less rapidly used but still in advance of estimates. On the other hand, the program for needy children is not being fully utilized and a broader program is being developed to provide additional services. It was reported that cutbacks may be required to meet the deficits in the OAS and ANB programs by eliminating elective office surgery and prescribing of vitamins and nutritionals.

On motion duly made and seconded, it was voted that the liaison committee to the State Department of Social Welfare, the Committee on Legislation and the members of Reference Committee 3A of the 1958 House of Delegates should hold a joint meeting at Disneyland the evening of Friday, November 7, 1958, immediately preceding the Council meeting.

19. *Fees Paid by State Agencies:*

Councilor Teall discussed the review conducted by the California State Department of Finance and an Interdepartmental Committee in an effort to arrive at a uniform schedule of medical and surgical fees to be paid by state departments or agencies which purchase these services.

On motion duly made and seconded, the following resolution was adopted:

Resolved: That the CMA Council instruct the Committee on Legislation of the CMA to initiate action leading to a concurrent resolution of the California Legislature which shall provide that: whenever California state agencies pay for medical care on a fee for service basis, it is the intent of the Legislature that the State shall pay the current usual prevailing fees for such services, with full consideration for county and geographic area variations.

20. *Committee on Legislation:*

Mr. Ben Read and Mr. Eugene Salisbury of the Public Health League of California gave a progress report on legislative activities.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:30 p.m.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

In Memoriam

Blaine, Edward S. Died in San Marino, October 8, 1958, aged 75, of heart failure. Graduate of Milwaukee Medical College, Wisconsin, 1911. Licensed in California in 1931. Dr. Blaine was a member of the Los Angeles County Medical Association.

✣

Broughton, George Anthony. Died in La Jolla, October 20, 1958, aged 83. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1896. Licensed in California in 1896. Dr. Broughton was a retired member of the Ventura County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Bryan, Charles Silas, Jr. Died in Berkeley, October 28, 1958, aged 47, of cardiac failure due to thrombosis left coronary artery due to arteriosclerosis. Graduate of Harvard Medical School, Boston, Massachusetts, 1937. Licensed in California in 1952. Dr. Bryan was a member of the Alameda-Contra Costa Medical Association.

✣

Di Rienzo, George M. Died October 14, 1958, aged 32, of acute myocardial failure secondary to coronary atherosclerosis. Graduate of New York Medical College, Flower and Fifth Avenue Hospitals, New York, 1948. Licensed in California in 1952. Dr. Di Rienzo was a member of the Napa County Medical Society.

Fracasse, John. Died in San Diego, August 5, 1958, aged 51. Graduate of Georgetown University School of Medicine, Washington, D. C., 1935. Licensed in California in 1947. Dr. Fracasse was a member of the San Diego County Medical Society.

✣

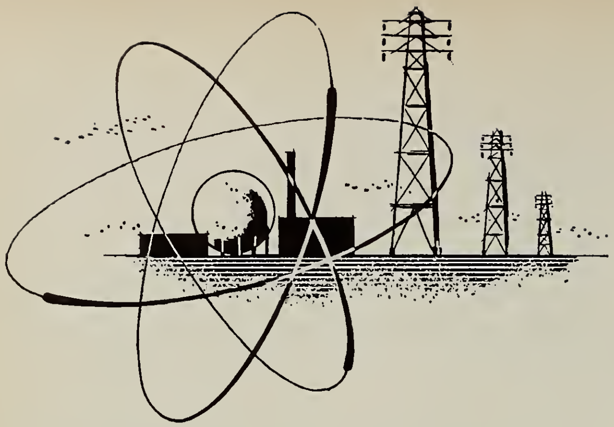
Keenan, Alexander S. Died October 19, 1958, aged 86. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1898. Licensed in California in 1898. Dr. Keenan was a retired member of the San Francisco Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Pope, Emma Wightman. Died in Carmel, November 1, 1958, aged 87, congestive failure, cardiac arrest, arteriosclerosis. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1899. Licensed in California in 1900. Dr. Pope was a retired member of the San Francisco Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Powers, Edward S. Died October 19, 1958, aged 50, of a heart attack. Graduate of Washington University School of Medicine, St. Louis, Missouri. Licensed in California in 1935. Dr. Powers was a member of the Los Angeles County Medical Association.



ADDED ATTRACTION

for the

CALIFORNIA MEDICAL ASSOCIATION'S

1959 ANNUAL SESSION

THE SECOND GENERAL MEETING

WILL BE GIVEN OVER TO

a tour of the General Electric Company

VALLECITOS ATOMIC LABORATORY

TUESDAY, FEBRUARY 24, 1959

LEAVE SAN FRANCISCO IN BUSES AT NOON. YOU WILL BE BACK BY 6:00 P.M.

This tour will take you through the nation's largest privately financed atomic research facility. There you will see General Electric's Vallecitos Boiling Water Reactor, doing constructive, peace-time work. The reactor is being used with the Pacific Gas & Electric Company to generate electrical energy—for sale.

Here is an opportunity to become better acquainted with one of the marvels of our time. A lecturer will explain what you see as the tour progresses, and will answer your questions. Luncheon at the Old Hearst Ranch and bus fare are included in the price of the tour.

YES! I want to tour the Atomic Laboratory. Send me ________ tickets. My check for $________ ($5 per ticket) is attached.

Name________________________________

Street________________________________

City____________________ State____________

WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

Meet Your Auxiliary Officers

1958-1959

THIS is the third and final edition in the series of sketches and photographs of the 1958-59 officers of the Woman's Auxiliary to the California Medical Association. We hope you have enjoyed seeing them and learning about these energetic women who are devoting their time and talents to help us achieve our objectives throughout the state. They soon will gather to discuss their work for the years ahead at the annual meeting in San Francisco.

* * *

"GEMS." "Good Emergency Mother Substitutes" seemed to be a natural chairmanship for Pat Ingle. The mother of twin girls and two other teen-ettes, she has the nucleus of a "Gems" club right at home.

Mrs. Ingle

The training of young high school students in this project has resulted in an awareness of careers in nursing that is most gratifying.

As first President of the two-year-old Tehama County Auxiliary, Pat is Auxiliary-conscious and promotes good public relations.

* * *

NURSE RECRUITMENT. Pat Hart's training at St. Mary's Hospital, specializing in pediatric nursing, is background for her duties as Nurse Recruitment Chairman.

Mrs. Hart

She has served previously as State Chairman of Physicians Benevolence and A.M.E.F., has been twice President of the Contra Costa County Auxiliary, and is currently President of the Concord Community Hospital Auxiliary.

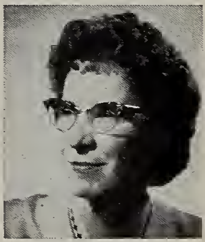
Son James is a midshipman at Annapolis, and daughter Kathy is an avid student of ballet and piano.

EDITOR OF *THE COURIER*. Dotty Flood comes to our Board with a fund of knowledge about so many subjects that editing *Courier* papers is a fun job and a pet hobby. After living in such out-of-the-way places as the Arctic Circle, Arabia, India and Kashmir, she is happy to be settled in California with her three "sprouts," Rick, Frances Jane and Roy, and husband "Bill" who is practicing general surgery in Concord, Contra Costa County.

Mrs. Flood

* * *

AMERICAN MEDICAL EDUCATION FOUNDATION. Mrs. Alexander Cruden's consuming interest in medicine and the allied arts has been our good fortune. Local Auxiliary activities in Ventura County led to a two-year term as District Councilor and a year as Public Relations Chairman on the state level. This year she is our A.M.E.F. Chairman.



Mrs. Cruden

When Edith isn't involved in medical and civic activities, she thoroughly enjoys skiing vacations with her family.

* * *

CIVIL DEFENSE. Mrs. Nelson Moore, a delightful mother of five young adults, enjoys riding and swimming with her family and finds time to serve on the Republican State Central Committee, is a past President of the local Republican Woman's Club and is President of the local Hospital Auxiliary in Monterey.

Mrs. Moore

Elizabeth has a working philosophy—"Good politics, good medicine and good fellowship all make an interesting life."

TODAY'S HEALTH AND BULLETIN. As Corresponding Secretary last year, Sue Karr was enthusiastic and untiring in her efforts. She serves her community on many committees and enjoys working with the P.-T.A., the V.N.A., the Assistance League of San Mateo and the Peninsula University of California Alumni Club.

Mrs. Karr

We anticipate a great increase in subscriptions to both *Today's Health* and the *Bulletin* with Sue at the helm.

* * *

CHAIRMAN OF LEGISLATION. Mrs. Robert Douds comes to the State Auxiliary as chairman of legislation, with a background of service to the Kern County Auxiliary and with a firm conviction that medical legislation should be of primary interest to all of us.

A former laboratory technician, with an affinity for baseball and bridge, Annette keeps pace with two teen-age daughters and husband Bob.

Mrs. Douds

* * *

PUBLIC RELATIONS. Mrs. G. Emmett Raitt is a busy person. Two grammar school boys, hobbies by the dozen and civic interests, all keep Harriette tuned to public relations in her community and the part we must take to create "good public relations" in our statewide program. She was historian of the State Auxiliary last year, and a member of the 1958-1959 nominating committee. We are keeping her busy.

Mrs. Raitt

PHYSICIANS BENEVOLENCE. Doing things in a big way is second nature to Ellaine Glesne. Five adopted children have been blessed with a mother who finds time to share their individual interests, to do community service on the same scale, and to serve Imperial County Auxiliary as its President while promoting bigger and better contributions for our Physicians Benevolence program on the state level.

Mrs. Glesne

* * *

STATE HISTORIAN. With energy to spare and a willingness to serve, Annie Holmes returns to state office from Fresno County, with a fund of information about Auxiliary and Auxiliary members.

Her recorded evidence that our activities and progress are of real historic interest will be colored with her experience as a former District Councilor for two years, and a two year term as Editor of *The Courier*.

Mrs. Holmes

* * *

SAFETY. Rosalind Bricca says, "I thoroughly enjoy my family, friends and living a busy life." Her activities in some dozen organizations dealing with children and youths proves her statement.

Safety—in the home and for the protection of children—is very close to her heart, and community service is her hobby.

A native San Franciscan, with two lovely young daughters, Rosalind is indeed "busy."

Mrs. Bricca

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Dudley Bell of Oakland was installed as president of the Alameda-Contra Costa Medical Association at a meeting in November. He succeeded Dr. John Blum. Also installed were Dr. John G. Morrison, San Leandro, vice-president; Dr. David Dugan, Oakland, secretary-treasurer.

Newly-elected members of the association's council are: Dr. Alfred Goggio and Dr. Arthur Rice, Berkeley; Dr. Ralph Bigger, Walnut Creek; Dr. Bruce Henley and Dr. Harold Kay, Oakland; Dr. Samuel Gersten, San Lorenzo.

* * *

Dr. Malcolm H. Merrill, Director of the California State Department of Public Health, was elected president-elect of the American Public Health Association at the recent annual meeting of the organization in St. Louis. Dr. Merrill will be installed as president at next year's annual meeting, which will be held in Atlantic City.

LOS ANGELES

At the Interim Meeting of the American Institute of Ultrasonics in Medicine held in Philadelphia, **Dr. John H. Aldes**, Los Angeles, was elected secretary-treasurer and a member of the executive board.

SAN DIEGO

Dr. Chester Tancredi of San Diego was elected president-elect of the San Diego County Medical Society at a meeting of the society in November. He will succeed to the presidency in January 1960 upon the retirement of Dr. Joseph W. Telford from that position. The election of Dr. Clifford L. Graves as secretary and of Dr. Robert T. Plumb as treasurer was also announced. They will take office in January 1959.

SAN FRANCISCO

Dr. Rodney R. Beard of Stanford Medical School was elected president of the Association of Teachers of Preventive Medicine for 1958-59 at a national meeting of the group in St. Louis. Dr. Beard is a professor and head of Stanford's Department of Preventive Medicine.

* * *

A San Francisco physician was awarded a Mead Johnson scholarship for continuing residency training in anesthesiology at the recent annual meeting of the American Society of Anesthesiologists in Chicago. He is **Dr. Robert Douglas Winship**, now receiving residency training at the University of California hospitals, San Francisco.

The awards are made to deserving physicians already engaged in residency training for specialization in anesthesiology, and are granted on the basis of meritorious work in clinical and research fields, plus general qualifications for success of the specialty.

GENERAL

The Ann Langer Cancer Research Foundation has announced the offering of an annual award of $500 for meritorious investigation in the field of cancer research, either clinical or laboratory. The award is being supported by the family of the late Bertha Goldblatt Teplitz and carries her name. Competition shall be limited to physicians and other scientists, clinical or laboratory, under the age of 45. Nominations should be submitted to Teplitz Award Committee, 612 North Michigan Avenue, Chicago 11, by February 1, 1959 and should be accompanied by a short one-page statement and biography.

* * *

The American Orthopsychiatric Association will hold its 36th annual meeting, its first national meeting it has ever had west of the Mississippi, in San Francisco, March 30 and 31 and April 1, 1959. Professional persons concerned with problems of human behavior are invited to attend, whether members of the association or not.

The association, an organization of psychiatrists, psychologists, social workers and outstanding social scientists, has been a meeting ground for a multi-disciplinary approach to various aspects of behavioral research, treatment of mental illness in children and adults and methods of training professional personnel.

Its meeting will be opened by the association's president, **Dr. Stanislaus A. Szurek**, director of children's service at the Langley Porter Neuropsychiatric Institute, San Francisco.

POSTGRADUATE

EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Physiological and Clinical Consideration of:

- **Gastrointestinal Tract.** Wednesday, December 17, 1958. Six hours.‡
- **Respiration.** Wednesday, January 7, 1959. Six hours.‡
- **Kidney.** Wednesday, January 21, 1959. Six hours.‡
- **Nervous System.** Wednesday, February 4, 1959. Six hours.‡

Allergies. Friday and Saturday, January 23 and 24, 1959. Seven hours. Fee: $55.00 (including dinner).

Advanced Electrocardiography. Mondays, February 9 to March 23. Twelve hours. Fee: $50.00.

Medical Terminology: Intermediate (Section II). Tuesdays, February 10 through May 26, 1959. Forty-five hours. Fee: $35.00.

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‡Fee: $20.00 each.

Medical Terminology: Intermediate (Section I). Thursdays, February 12 through May 28, 1959. Forty-five hours. Fee: $35.00.

Management of Surgical Emergencies. Friday, February 13, 1959. Six hours.*

Management of Medical Emergencies. Saturday, February 14, 1959. Six hours.*

Diagnostic Radiology. Friday and Saturday, March 6 and 7, 1959. Twelve hours. Fee: $60.00 (includes one-half day clinical demonstration).

Ear, Nose and Throat. Friday and Saturday, March 13 and 14, 1959. Six hours.*

Management of Sports Injuries. Wednesday and Thursday, March 25 and 26, 1959. Six hours.*

Steroids. Friday and Saturday, April 3 and 4, 1959. Six hours. Fee: $10.00.

Clinical Traineeships — Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Advances in Public Health Nursing. Thursday Evenings, January 15 to March 5. Sixteen hours. Fee: $15.00.

Postgraduate Clinics in Dermatology. Friday and Saturday, January 16 and 17. Fourteen hours. Fee: $40.00.

Anesthesiology. Thursday and Friday, January 22 and 23, 1959. Fourteen hours. Fee: $40.00.

Adolescents (Children's Hospital). Saturday, January 24. Seven hours. Fee: $12.50.

Pharmacologic Approach to the Study of the Mind. Sunday through Tuesday, January 25 through 27, 1959. Twenty-one hours. Fee: $40.00.

Course for Physicians in General Practice (Mount Zion Hospital). Monday through Thursday, February 2 through February 5. Twenty-eight hours.*

Advances in Psychiatric Nursing. Thursday evenings, March 12 through April 30. Sixteen hours. Fee: $15.00.

Diagnostic Radiology. Friday through Tuesday, March 20 through March 24. Thirty-five hours.*

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14, 1959. (As a time and money saver, round trip air travel is also possible July 29 to August 10, 1959.)

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Audio-Visual Postgraduate Refresher Courses. Courses are made up of four or more half-hour lectures each, recorded on hi-fi magnetic tape and illustrated by 35-mm. filmstrips or slides in full color, and adapted for use on any standard tape recorder and filmstrip or slide projector, automatic or manual.

Contact: Paul D. Foster, M.D., chairman, Committee on Audio-Visual Courses, College of Medical Evangelists School of Medicine, 316 North Bailey St., Los Angeles 33.

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Thorax, Abdomen and Pelvis (27 periods, 121 hours), January 7 through April 15, 1959. Tuition: $125.00. **Head and Neck** (14 periods, 63 hours), April 22 through June 3, 1959. Tuition: $75.00.

Surgical Anatomy—Thorax, Abdomen and Pelvis (14 periods, 28 hours), January 7 through April 15, 1959. Tuition: $50.00. **Head and Neck** (12 periods, 24 hours), April 22 through June 3, 1959. Tuition: $35.00.

1959 Alumni Postgraduate Convention. Refresher Courses, March 8 and 9 at 1720 Brooklyn Avenue; Scientific Assembly, March 10, 11 and 12 at Biltmore Hotel. *Contact:* Walter Crawford, executive secretary, 316 North Bailey Street, Los Angeles 33.

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*Fees to be announced.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

ANNUAL SESSION POSTGRADUATE COURSES

BY STANFORD UNIVERSITY SCHOOL OF MEDICINE:

Ophthalmology. 4 hours. Saturday, February 21, 9:00 a.m. to 1:00 p.m. at Stanford University Hospital.

Neurology for Physicians. 12 hours. Saturday and Sunday, February 21 and 22, 9:00 a.m. to 12 noon and 1:00 p.m. to 4:00 p.m. at Stanford University Hospital.

Treatment of Hernia. 9 hours. Sunday, Monday and Tuesday, February 22, 23 and 24, 9:00 a.m. to 12 noon at Stanford University Hospital.

BY UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE:

Medicine in the Jet and Space Age. 7 hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 1:30 p.m. to 5:00 p.m. at University of California Medical Center.

Family Endocrinology. 9½ hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 2:00 p.m. to 5:00 p.m. Monday, February 23, 9:00 to 12 noon at University of California Medical Center.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel Californian, Fresno. Chairman: Owen Steinbach, M.D., 3004 Fresno St., Fresno.

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25, 26 and 27, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued early next year. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

JANUARY MEETINGS

Departments of Otolaryngology of the College of Medical Evangelists and University of Southern California School of Medicine, jointly present a postgraduate course in "Reconstructive Surgery of the Nasal Septum and External Nasal Pyramid," at White Memorial Hospital, Los Angeles. Sessions start Tuesday evening, January 6, through Friday, January 9, 1959, and will resume Monday, January 12, ending noon Friday, January 16, 1959. *Contact:* Leland House, M.D., 1720 Brooklyn Avenue, Los Angeles 33.

Tuberculosis and Health Association of Los Angeles County, Chest Disease Symposium, co-sponsored by Tuberculosis and Health Association of Los Angeles County, and Trudeau Society, January 9 and 10, Hotel Statler. *Contact:* Horace R. Getz, M.D., Chairman, Planning Committee, 1670 Beverly Blvd., Los Angeles 26.

Southwestern Pediatric Society Dinner Meeting, University Club, Los Angeles, 6:30 p.m., January 14. *Contact:* Robert Shirley, M.D., secretary-treasurer, 11633 San Vicente Blvd., Los Angeles 49.

Los Angeles County Heart Association, Midwinter Symposium on Heart Disease, January 14, 9:00 a.m. to 4:30 p.m., Hotel Statler. *Contact:* Chauncey Alexander, Executive Director, 660 S. Western Avenue, Los Angeles 5.

Southern California Chapter, American College of Surgeons Annual Meeting, January 16 through January 18, Coronado Hotel, Coronado. *Contact:* Max R. Gaspar, M.D., secretary-treasurer, 211 Cherry Avenue, Long Beach 2.

Long Beach Heart Association, Tuberculosis Association and Cancer Society, Medical Institute on Cancer and Diseases of Heart, Chest and Lungs, January 21, 1:30 p.m., Lafayette Hotel, Long Beach. *Contact:* Raymond W. Kelso, Jr., M.D., Chairman, 117 E. 8th Street, Long Beach, HE 2-7971.

Fresno County Heart Association, Seventh Annual Central California Cardiovascular Symposium, January 24, 8:00 a.m. to 5:00 p.m., Fresno Memorial Auditorium, Fresno. *Contact:* Robert W. Potter, M.D., Chairman, Scientific Committee, 329 North Van Ness, Fresno 1.

Orange County Heart Association, Annual Symposium on Heart Disease, all day January 24, Disneyland Hotel, Anaheim (Gourmet Restaurant). *Contact:* Howard G. Buswell, Executive Director, P. O. Box 1704, Santa Ana.

Western Society for Clinical Research, January 29 through January 31, Carmel. *Contact:* William N. Valentine, M.D., secretary, U.C.L.A. Medical Center, Los Angeles 24.

FEBRUARY MEETINGS

Contra Costa County Heart Association Sixth Annual Postgraduate Course for Physicians, Mondays, February 2 through April 13, 8:00-10:00 p.m., Contra Costa County Hospital, Martinez. *Contact:* Mrs. Loyse Casebolt, Executive Director, 2030 N. Main Street, Walnut Creek.

Alameda-Contra Costa Medical Association and the Institute for Metabolic Research Seventh Annual Symposium on Metabolic Problems. All day, February 16 through February 18, 1959. Auditorium, Highland-Alameda County Hospital, Oakland, California. *Contact:* L. W. Kinsell, M.D., director, Institute for Metabolic Research, 2701 14th Avenue, Oakland 6.

American College of Chest Physicians Fourth Annual Postgraduate Course on Diseases of the Chest, February 16 through February 20, 1959. Sir Francis Drake Hotel, San Francisco, California. *Contact:* Executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

California Medical Association Annual Meeting, February 22 through February 25, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

SPRING, SUMMER AND FALL MEETINGS, 1959

American College of Allergists, March 15 through March 20, Mark Hopkins Hotel, San Francisco. *Contact:* John D. Gillaspie, M.D., treasurer, 2049 Broadway, Boulder, Colorado.

American Orthopsychiatric Association 36th Annual Meeting, March 30 through April 1, Sheraton-Palace Hotel, San Francisco. *Contact:* Donald Shaskan, M.D., chairman, Arrangements Committee, Veterans Administration, 49 Fourth St., San Francisco 3.

California Tuberculosis and Health Association and California Trudeau Society Annual Meeting, April 2 through 4, Villa Motor Hotel, San Mateo. *Contact:* Mrs. Mary C. French, 130 Hayes Street, San Francisco.

Los Angeles County Heart Association Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., Chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

American Academy of Pediatrics Spring Session, April 13 to April 19, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* Charles H. Cutler, M.D., state chairman, Northern California Chapter, 2615 I Street, Sacramento.

American College of Physicians Meeting, Conrad Hilton Hotel, Chicago, April 20-24, 1959. *Contact:* Mr. E. R. Loveland, Executive Secretary, 4200 Pine Street, Philadelphia 4.

The Nevada Academy of General Practice Annual Meeting, May 21 through 23, Riverside Hotel, Reno. Program by University of Southern California School of Medicine. *Contact:* Roy M. Peters, M.D., Chairman, 475 S. Arlington Avenue, Reno, Nevada.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

Western Branch, American Public Health Association Annual Meeting. June 1 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

Rocky Mountain Cancer Conference, Scientific only, July 22 through 23, 9:00 a.m., Brown Palace Hotel, Denver. *Contact:* N. Paul Isbell, M.D., Chairman, 835 Republic Building, Denver 2, Colorado.

Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, Executive Secretary, 1309 Seventh Avenue, Seattle, Washington.

Western Industrial Medical Association Combined Meeting with Nurses, Safety Groups, Hygienists, Third Western Industrial Health Conference, October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

INFORMATION

Addition to Motor Vehicle Code Concerning Use of Dangerous Drugs

RECENTLY new sections have been added to the California Motor Vehicle Code concerned with driving while under the influence of narcotics and other drugs. The intention is to provide the California Highway Patrol with a legal basis for removing such drivers from the highways. The medical profession will be called upon to assist in establishing the fact of use of these drugs.

The Vehicle Code sections which are in addition to those concerning alcohol read in part as follows:

> ". . . It is unlawful for any person who is addicted to the use or under the influence of *narcotic drugs or amphetamine or any derivative thereof* [editor's italics] to drive a vehicle upon any highway. Any person convicted under this subsection shall be guilty of a felony . . ."
>
> "It is unlawful for any person under the influence of *any drug other than a narcotic or amphetamine or any derivative thereof,* [editor's italics] to a degree which renders him incapable of safely driving a vehicle, to drive a vehicle upon any highway. Any person convicted under this subsection shall be guilty of a misdemeanor . . ."
>
> ". . . Any person who, while knowingly under the influence of any *dangerous drug* [editor's italics] other than a narcotic, to a degree which renders him incapable of safely driving a vehicle, drives a vehicle and when so driving does any act forbidden by law or neglects any duty imposed by law in the driving of such vehicle, which act or neglect proximately causes bodily injury to any person other than himself is guilty of a felony . . ."

While the signs, symptoms and medical tests available to assist in the detection of persons under the influence of alcohol and most narcotics are well known to the medical profession and to Highway Patrol officers, they may not be so well known for the so-called "dangerous drugs." The number of such drugs is enormous and increasing daily. It is obviously impossible for Highway Patrol officers or even physicians to be completely familiar with the composition and effects of each of them.

To help Highway Patrol officers in the enforcement of the new statutes the California State De-

	*Laboratory Tests Available**	
Representative Drugs	*Blood*	*Urine*
Hypnotics		
Barbiturates	xxx	xxx
Bromides	xxx	xxx
Chloral hydrate	xxx	?
Paraldehyde	xx	?
Glutethimide (Doriden)	0	x
Methylparafynol (Dormison)	0	0
Methyprylon	0	0
Common signs of use: Impaired neuromuscular coordination, confusion, ataxia, slurred speech, drowsiness, amnesia, diminished reflexes, nystagmus.		
Analgesics		
Morphine	0	xxx
Heroin	0	xxx
Codeine	0	x
Methadone	?	xxx
Meperidine (Demerol)	?	xxx
Dihydroxycodeinone (Percodan)	0	x
Propoxyphene (Darvon)	0	0
Common signs of use: Depression, pupillary changes, euphoria. Withdrawal signs: restlessness, yawning, perspiration, rhinorrhea, lacrimation, piloerector signs, abdominal cramping.		
Antihistamines		
Dimenhydrinate (Dramamine)	x	x
Diphenhydramine (Benadryl)	x	x
Meclizine (Bonamine)	x	x
Methapyrilene (Histodyl)	x	x
Promethazine (Phenergan)	x	x
Pyrilamine maleate (Neo-Antergan)	x	x
Tripelennamine (Pyribenzamine)	x	x
Common signs of use: Sedation or stimulation, vertigo, impaired vision, diplopia, dryness of the mouth.		
Psychotomimetic agents		
d-Lysergic acid diethylamide (LSD)	x	x
Marihuana	0	x
Mescaline	0	0
Common signs of use: Bizarre behavior, reddened conjunctiva, drooping eyelids, "Cubeb" odor of breath (marihuana), hallucinations, disorientation.		
Psychomotor stimulants		
Amphetamine (Benzadrine)	0	x
Methamphetamine	0	0
Ephedrine	0	0
Iproniazid (Marsilid)	0	x
Common signs of use: Exhilaration, mydriasis, tachycardia, hypertension, confusion, tremors, nervousness.		
Tranquilizers		
Reserpine	x	?
Chlorpromazine	x	x
Promazine (Sparine)	x	0
Meprobamate (Miltown)	x	0
Hydroxyzine (Atarax)	0	0
Common signs of use: Psychomotor depression, dreamlike tranquility, muscular rigidity (Parkinsonism), hypotension, reversible depression, convulsions.		

---

*xxx—Available, readily applicable and established.
xx—Available and readily applicable.
x—Available.
0—Not available.
?—Questionable validity.

partment of Public Health has requested three distinguished California physicians to prepare information concerning the principal classes of potentially dangerous drugs, simple physiologic signs which may indicate their use, and an indication as to what confirmatory laboratory tests are available. The physicians who have thus assisted are Charles H. Hine, M.D., Ph.D., Windsor C. Cutting, M.D., and Matthew N. Hosmer, M.D.

Physicians may find this listing, in somewhat more technical terms than that prepared for the Highway Patrol, of value in refreshing their knowledge in regard to the common and dangerous drugs.

In assisting the Highway Patrol officers in the application of these new statutes designed to improve highway safety, the practitioner will be obliged to be most careful and thorough in his physical examination and clinical evaluation of persons who may be suspected of drug use.

Physicians Make Recommendations for Prevention of Automobile Accidents and Injury

Under the able leadership of C. Hunter Shelden, M.D., chairman of the Medical Division, an outstanding program was presented for the physicians attending the Governor's Traffic Safety Conference in Sacramento on October 1-3. Physicians from all over California and from other states participated in two days of presentations and discussions, out of which the following recommendations were made to the Governor regarding the medical aspects of traffic accident prevention.

1. That a special licensing program for ambulance drivers be instituted to include examination in the adequate care of the injured, and that basic first-aid equipment be carried in all ambulances.

2. That ambulances be required to operate within the normal traffic regulations including speed limits, in all but exceptional instances, in which case a written report must be made to the law enforcement agency.

3. That the administration of tests for blood alcohol be further studied, that outside independent laboratories be employed to analyze the blood samples, and that a more realistic blood level of alcohol be established as the upper limit acceptable to law enforcement agencies.

4. That an implied consent law for blood alcohol tests be established in California, as suggested by the Uniform Vehicle Code.

5. That tests for blood alcohol be required of drivers who become involved in accidents and that these tests be ordered at the discretion of the examining police officer.

6. That a committee be established to study and possibly revise regulations governing licensing of drivers with a history of unconscious attacks or seizures.

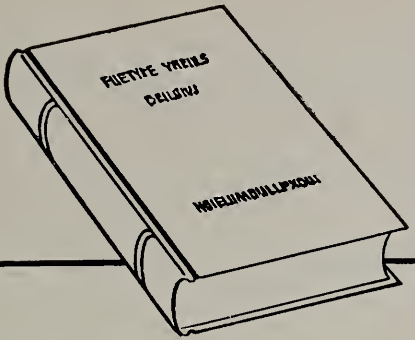
7. That in the study booklet issued for driver licensing, a section be incorporated relating to accident frequency, fatality statistics, and other basic safety information, and requiring that questions based on this section be answered in the examination.

8. That an investigation be carried out to determine the desirability and feasibility of the Department of Mental Hygiene reporting to the Division of Drivers' Licenses all admissions to state hospitals and mental institutions.

9. That all employers (including state and local governments) who hire commercial drivers provide for the periodic medical examinations of their drivers to determine their fitness to operate commercial vehicles.

10. That organized medicine and appropriate state agencies cooperate in providing uniform standards for fitness to operate commercial and private vehicles in California.

11. That the State of California take active steps in promoting the establishment of a Federal Bureau of Motor Vehicle Affairs which will establish and enforce safety specifications governing all motor vehicles sold in the United States and that this Bureau be similar in function to the Civil Aeronautics Administration.



THE PHYSICIAN'S *Bookshelf*

CORRECTION

In the October issue of CALIFORNIA MEDICINE, the price of the book "Alcoholism" by Arnold Z. Pfeffer was printed as $6.50. The price is $4.50.

OBSTETRICAL PRACTICE—Seventh Edition—Alfred C. Beck M.D., Professor Emeritus of Obstetrics and Gynecology, State University of New York, College of Medicine at New York City; formerly Professor of Obstetrics and Gynecology, Long Island College of Medicine; and Alexander H. Rosenthal, M.D., Clinical Associate Professor of Obstetrics and Gynecology, State University of New York, College of Medicine at New York City; Chief Obstetrician and Gynecologist, Long Island Jewish Hospital, New Hyde Park, N. Y. The Williams & Wilkins Company, 1958, Baltimore, Maryland. 1115 pages, $14.00.

This textbook has become firmly established as a leader in its field, and its popularity is attested by the appearance of this new edition only three years after the appearance of the previous one. In order to include much of the newer knowledge of placental function, the section dealing with the structure and physiology of this organ was entirely rewritten and considerably extended. Numerous revisions have been made in the chapters concerned with prenatal care and the management of labor. To quote a few, continuous intravenous pitocin infusions are advised for uterine dysfunction, the Crede technique for placental delivery has been replaced by the Brandt suprapubic maneuver, and more rigid criteria have been cited for the use of potentially dangerous radiologic examinations and blood transfusions during pregnancy.

Other chapters which have been rewritten are those on multiple pregnancy, prolapse of the umbilical cord, and choriocarcinoma. Newer views on the etiology and treatment of hydramnios, resulting from Plentl's investigations using deuterium oxide as a tracer, are described and there is a graphic representation of water exchange in normal pregnancy and in pregnancy complicated by hydramnios. A good deal of new material on anomalies of the umbilical cord has been added, and in the chapter on retained placenta it is now recommended that manual removal be undertaken immediately if hemorrhage is profuse, otherwise after an expectant delay of no more than half an hour.

The book is profusely illustrated with the simple, clear line drawings which have been so helpful in previous editions, and there is an appendix consisting of 22 photographs of roentgenograms showing various types of pelves, abnormal fetal positions, and a few other pathologic situations. This continues to be an excellent textbook, particularly well adapted to the undergraduate student because it is relatively devoid of controversial material and theories of doubtful validity. For the same reason, the more advanced graduate student or the practicing specialist may find its didactic tone and concise statements unsuited to their needs.

CHAS. E. MCLENNAN, M.D.

ENDOCRINE PATHOLOGY OF THE OVARY—John McLean Morris, M.D., Associate Professor of Gynecology, Yale University School of Medicine; and Robert E. Scully, M.D., Clinical Associate in Pathology, Harvard Medical School, C. V. Mosby Company, St. Louis, 1958. 151 pages, 75 illustrations, $8.50.

This thin monograph, written by a gynecologist and a pathologist, deals with a small but fascinating segment of ovarian pathology. An introductory section discusses gonadal embryology and histology, sex hormones, and the various endocrine syndromes associated with ovarian lesions. Some attention is given to non-neoplastic lesions, such as polycystic ovaries and hyperthecosis, but the major portion of the book is devoted to functioning ovarian tumors. A final chapter describes the so-called "functioning stroma" of certain tumors not customarily thought to have functional potentialities, such as occasional Brenner tumors, cystadenomas, and ovarian carcinomas.

In addition to many excellent photomicrographs and much descriptive histopathology, the book contains abundant clinical information and many pertinent case reports from teaching hospitals in Boston and New Haven. It should be of value to all pathologists who encounter ovarian lesions, and should be available to gynecologists, pediatricians, and internists who have occasion to sort out endocrine disorders. The numerous reference lists appended to each chapter are particularly helpful.

CHAS. E. MCLENNAN

* * *

COCCIDIOIDOMYCOSIS — Marshall J. Fiese, M.D., F.A.C.P., Director of Health Services, Fresno State College; Clinical Instructor in Medicine, Stanford University School of Medicine; Consultant in Internal Medicine and formerly Chief, Medical Service, Fresno Veterans Administration Hospital. Charles C. Thomas, Springfield, Illinois, 1958. 253 pages, $9.50.

With the widespread realization, during the past few years, of the practical importance of mycotic infections such as coccidioidomycosis and histoplasmosis, it was inevitable that someone should "take stock" in monographic form of one or more of these diseases.

No one could be better fitted to deal with coccidioidomycosis than Dr. Fiese. Educated at Stanford in the atmosphere created by Dickson and by C. E. Smith, later an active worker in the field in the San Joaquin Valley, he is expert in the subject to his finger tips.

Dr. Fiese has produced a beautiful and definitive monograph. Beginning with the admirable section on the historical development of the subject no phase is left untouched —pathology, mycology, immunology, epidemiology, treatment, etc. The book is handsomely printed on fine paper, profusely illustrated, and there is a comprehensive chronological bibliography of 968 titles.

ARTHUR L. BLOOMFIELD, M.D.

REGIONAL ILEITIS—2nd Revised Edition—Burrill B. Crohn, M.D., Consulting Gastroenterologist, Mount Sinai Hospital, New York, and Harry Yarnis, M.D., Associate in Medicine for Gastroenterology, Mount Sinai Hospital, New York, with special contributions by Richard H. Marshak, M.D., and David A. Turner, Ph.D. Distributed by Grune & Stratton, Inc., 381 Fourth Ave., New York 16, N. Y. (and 99 Great Russell Street, Lond. W.C. 1), 1958. 239 pages, $7.25.

In this little monograph Drs. Crohn and Yarnis have brought up to date their very extensive experience of over six hundred cases of regional ileitis, supplemented with an extensive review of the literature of this disease, described by the senior author in 1932. While there is little that is new in the book, nonetheless, it is an excellent summary of our knowledge of this disease which the authors are inclined to look upon as a relatively benign one in most patients. A surgical approach is recommended by them more commonly than is the case with many other experts on this subject. There is considerable discussion of malabsorption in ileitis, of acute regional ileitis and of ilecolitis which adds considerably to the interest and value of the book. The x-rays included in the chapter by Dr. Marshak are excellent.

Internists and surgeons will find this volume particularly useful and interesting.

Dwight L. Wilbur

* * *

MEDICO-MORAL PROBLEMS — Gerald Kelly, S.J., Catholic Hospital Association, St. Louis, 1958. 375 pages, $3.00.

Father Kelly has collected material published in five previous booklets, condensing, amplifying and adding as indicated. He gives in straightforward style, supported by appropriate directives, the current stand of the Roman Catholic Church on various moral problems concerned with medicine. It is no surprise to find primary concern with the unborn child. The difficult problem of sacrificing the mother on behalf of the child when both cannot be saved is treated in detail, with encouraging reports that science is approaching the goal of saving both in increasing numbers. Should termination of pregnancy be an unavoidable incident in treating the mother for a dangerous disease such as carcinoma of the uterus or extrauterine pregnancy, this is held to be both good medicine and good morality.

In similar fashion, what is good medical practice in other fields is looked upon as morally right. Sterilization per se is considered indefensible, but it may be done within the moral pale if the medical indications are unequivocal. Avoidance of pregnancy by observing rhythm is allowable, but the physician is urged to "dissipate the exaggerated fears or notions and thus help the couple to start marriage with the proper idea of childbearing and its blessings." The Church rejects completely artificial insemination even if the husband of the woman is the donor. Even the examination of the man for sterility is hedged about with restrictions, since the use of a condom or of masturbation is considered immoral.

Problems of baptism under various conditions are treated in considerable detail, from its application to the presenting part at birth to the dying unconscious patient who has previously rejected spiritual counsel. It is assumed that the Lord's grace has descended upon the moribund individual. "We seldom, if ever, know whether it produces the desired result."

Experimentation upon humans requires consent of the subject, but even so, the subject does not have unlimited disposal of his life and health, since he is not the owner of his body, but only the administrator under God. Furthermore he must observe the law of hierarchy of values, and may not permit an operation that would deprive him of the use of his higher faculties "merely to cure some bodily or emotional ailment." The same morality holds true in procedures designed for the good of others or the advancement of science. Even the physician is limited as to the risk he may undergo in experimenting upon himself. The use of individuals for experimentation at the behest of the state is utterly condemned.

Provided the medical indications are satisfactorily met, such procedures as electroshock, psychosurgery, hypnosis and narcoanalysis are morally permissible based, as are many other procedures, on the law of double effect, the desired results outweighing the unfavorable side-effects.

All but ultraliberal Catholics will accept Father Kelly's interpretations of the decisions, as will many who are non-Catholics but well-grounded in problems of general morality. There are areas, as the author points out, in which theologians and moralists disagree, and circumstances in individual cases that call for nicely graded decisions as to the morality of this or that procedure. Some of the conclusions will strike the non-Catholics as medically quite arbitrary and unsupportable, while others are clumsy expedients to get around prohibitions. For example: In testing for male sterility an intact condom is immoral but one with a hole in it is licit. This rests upon the tenet that sperm should always be deposited in the wife's vagina. The non-Catholic probably considers that a few million spermatozoa more or less will make no difference whatever in the long run in a couple's fecundity.

We may agree or disagree, but it is a good thing, nevertheless, to have the thinking of a moralist upon various medical problems. What Father Kelly has done is to assemble the thinking of Catholic moralists and physicians, supported by authorities of the Catholic Church, into a volume that is both reasonable and readable.

* * *

PRACTICAL CARDIOLOGY—Albert Salisbury Hyman, M.D., F.A.C.P., F.A.C.C., Associate Clinical Professor of Medicine, New York Medical College. Landsberger Medical Books, Inc., distributed by the Blakiston Division of the McGraw-Hill Book Co., 330 West 42nd Street, New York 36, N. Y., 1958. 307 pages, $7.00.

This volume reflects the author's interest in mensuration and systematization. While much is admirable, it does not fill the need of the general practitioner for a practical summary of cardiology.

Herbert C. Moffitt, Jr.

* * *

EPILEPSY—What It Is, What to Do About It—Tracy J. Putnam, M.D., formerly Professor of Neurology, Harvard Medical School; Former President, American League Against Epilepsy; Chief, Department of Neurosurgery, Cedars of Lebanon Hospital, Los Angeles; Consultant in Neurosurgery, Camarillo State Hospital, California. J. B. Lippincott Company, East Washington Square, Philadelphia, 1958. 190 pages, $1.25.

This small paper bound book is directed to "patients, their families and friends: nurses and schoolteachers." It can be read with profit also by the general practitioner, and even the specialist in the field will be rewarded by portions of the book. Enough theory is presented to give an appreciation of what is known of the nature of the disease. However, the practical aspect of the adjustment of the patient to the condition is stressed, and the advice given is sound and useful. One may question perhaps the detail in regard to drugs available, and there is no doubt that reading the book will cause many patients to ask questions of their physician. If the physician can answer these, fine; if not, he had better increase his knowledge about epilepsy until he can.

Henry Newman, M.D.

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KEY TO ABBREVIATIONS USED

(Or.)—Original Article; (Ed.)—Editorial; (CMA)—California Medical Association; (CR)—Case Report; (I)—Information; (LE)—Letters to the Editor; (MJ)—Medical Jurisprudence.

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CALIFORNIA MEDICAL ASSOCIATION

Scientific Sessions
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•
Meetings of the House of Delegates

88th Annual Session

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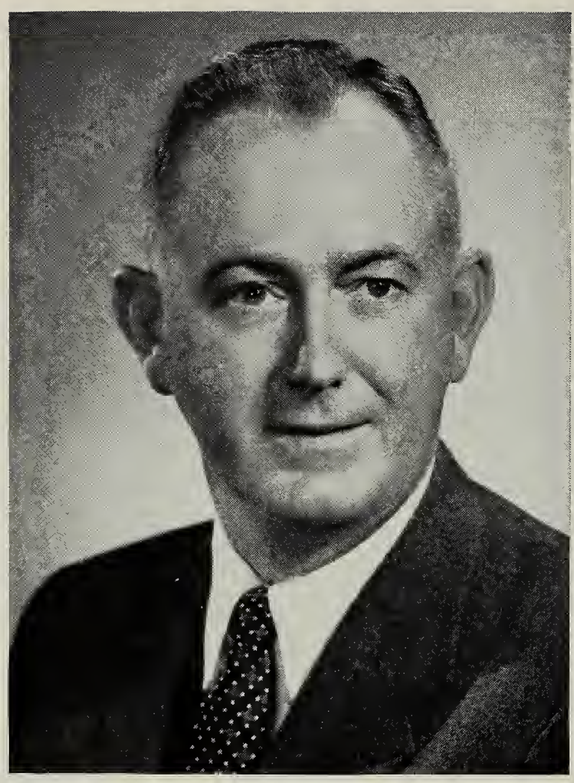
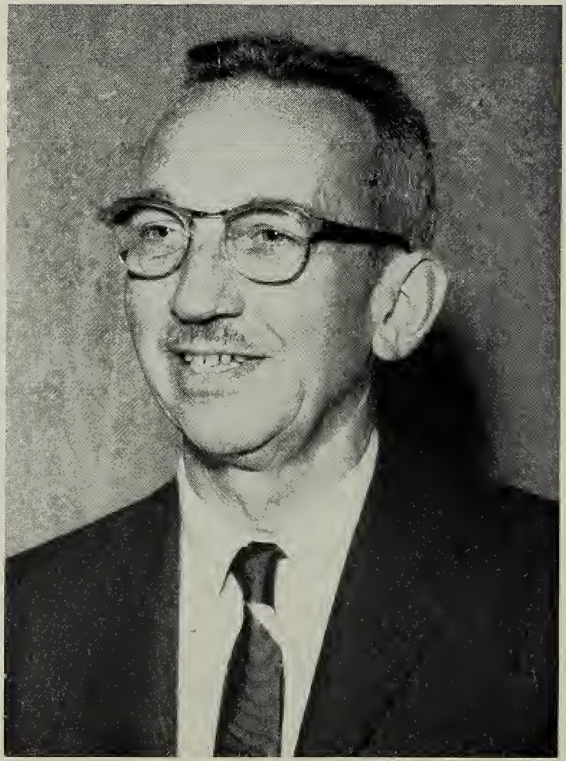
SAN FRANCISCO

February 22 to 25, 1959



FRANCIS E. WEST
President

T. ERIC REYNOLDS
President-Elect



Scientific Program

CALIFORNIA MEDICAL ASSOCIATION

Eighty-eighth Annual Session

SAN FRANCISCO

FEBRUARY 22-25 1959

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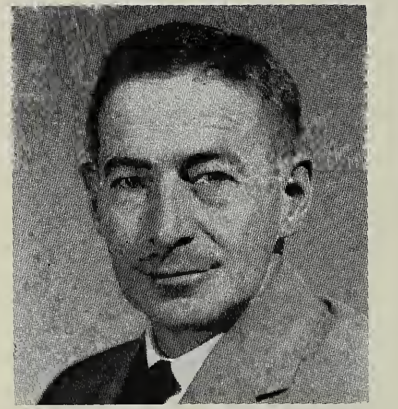
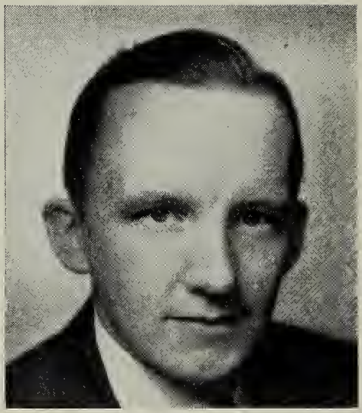
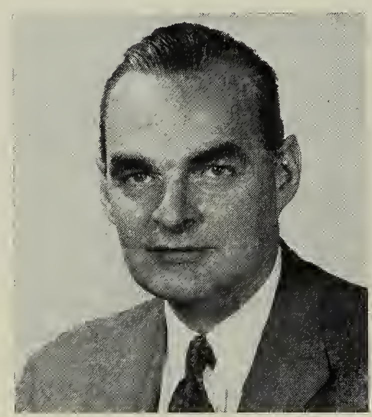


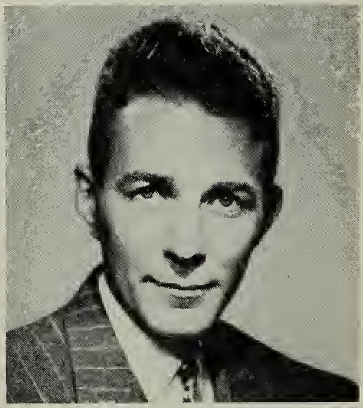
EDWIN B. ASTWOOD



C. ROLLINS HANLON



DONALD L. McRAE



WILLIAM WALLACE SCOTT

Guest Speakers

Edwin B. Astwood, M.D., Boston, Massachusetts—Professor of Medicine, Tufts College Medical School.

C. Rollins Hanlon, M.D., St. Louis, Missouri—Professor of Surgery and Director of the Department of Surgery, St. Louis University School of Medicine.

Donald L. McRae, M.D., Montreal, Quebec, Canada—Associate Professor of Radiology, McGill University, and Director of Radiology, the Montreal Neurological Institute.

William Wallace Scott, M.D., Baltimore, Maryland—Professor and Head of the the Department of Urology, Brady Urological Institute, Johns Hopkins University School of Medicine.

SPECIAL GUESTS OF SECTIONS

Warfield Garson, M.D., Chapel Hill, North Carolina—Venereal Disease Experimental Laboratory, U. S. Public Health Service.

Arthur Jones, M.D., Portland, Oregon—President, American Congress of Physical Medicine and Rehabilitation.

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QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION

(a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association or A.M.A. membership card.)

(b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. (A membership card of the Student American Medical Association or letter from their dean's office.)

(c) Medical secretaries will be admitted upon presentation of a letter from the physician employer.

(d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer.

(e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), student nurses, x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification.

(f) *All questions on admission will be passed upon by a member of the Committee on Registration who will be present at the desk.*

SCIENTIFIC SESSIONS

LOCATION	SUNDAY FEBRUARY 22		MONDAY FEBRUARY 23		TUESDAY FEBRUARY 24		WEDNESDAY FEBRUARY 25	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
SHERATON-PALACE								
Concert Room	**9:30 a.m.** **House of Delegates**						**9:30 a.m.** **House of Delegates**	
Comstock Room	**Evening—8 to 10 p.m.** **Medical Motion Pictures**		**Evenings—7:30 to 10 p.m.** **Medical Motion Pictures**		**Evenings—8 to 10 p.m.** **Medical Motion Pictures**			
CIVIC AUDITORIUM								
Larkin Hall	**9 a.m.** Film Symposium Proctology	**2 p.m.** Film Symposium Obstetrics Gynecology	**9 a.m.** Film Symposium Hypertension		**9 a.m.** Film Symposium Emergencies in Medicine	**2 p.m.** Film Symposium Dermatology	**9 a.m.** Film Symposium Cardiology	**2 p.m.** Film Symposium General Surgery
Polk Hall	**9 a.m.** Dermatology and Syphilology			**2 p.m.** General Meeting — Upper GI Bleeding	**12 NOON TOUR** Atomic Energy Plant and Laboratory, Vallecitos (See note below on where to gather for buses)		**9 a.m.** Pediatrics	**2 p.m.** Obstetrics and Gynecology Pediatrics
Room 301	**9 a.m.** Eye Internal Medicine					**VISIT TECHNICAL EXHIBITS**		
Room 402	**9 a.m.** General Surgery	**2 p.m.** Eye			**9 a.m.** Neurology			**2 p.m.** Anesthesiology
Room 403	**9 a.m.** Radiology	**2 p.m.** Radiology			**9 a.m.** Internal Medicine		**9 a.m.** Pyschiatry	**2 p.m.** Public Health
Room 404	**9 a.m.** Industrial Medicine and Surgery	**2 p.m.** Allergy	**9 a.m.** Industrial Medicine and Surgery Physical Medicine				**9 a.m.** Urology	**2 p.m.** Urology
Room 405	**9 a.m.** Orthopedics Pathology	**2 p.m.** Orthopedics	**9 a.m.** Ear, Nose and Throat				**9 a.m.** Obstetrics and Gynecology	

NOTE: Vallecitos Atomic Energy Plant and Laboratory Tour Buses leave from Main Entrance, Civic Auditorium; fee $5, including lunch. For program, see page 16.
Postgraduate Courses, Saturday, Sunday, Monday, and Tuesday. For locations, times, subjects and fees, see pages 12 to 15.
Council of the CMA meets daily at 7:30 a.m. in the California Room, Sheraton-Palace Hotel.
Reference Committees: Monday and Tuesday.

Information

BADGES. It is important that badges be worn at all times. Admission to scientific meetings is by badge only.

COUNCIL. First meeting of the Council will be held Saturday, February 21, 9:30 a.m., in the French Parlor, Sheraton-Palace Hotel. Further meetings will be held each morning at 7:30 a.m. in the California Room.

HOUSE OF DELEGATES. For meeting times, places and agenda, see pages 43 to 45.

EMERGENCY CALLS AND MESSAGES. Each physician should notify his own secretary regarding the *exact* section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will *attempt* to transmit messages to the individual physician.

In case of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the local county medical societies.

POSTGRADUATE COURSES. For program, meeting times and places, and fees, see pages 12 to 15.

EXHIBITS. Technical Exhibits—Main Arena, Civic Auditorium.

Scientific Exhibits—Main Arena, Civic Auditorium. See list on page 41.

Medical Motion Pictures—Daily, Room 301, Civic Auditorium; Evenings, Comstock Room, Sheraton-Palace Hotel. For program, see pages 37 to 40.

You are urged to visit and attend all exhibits.

MEETING TIMES AND PLACES. See chart on page 9 for exact times and places of general and section meetings.

REGISTRATION. Registration and information desks are located in the Main Arena, Civic Auditorium. *All members, guests, and visitors are requested to register immediately on arrival.* There is no charge for registration, except for Postgraduate Courses. Registration desks are open 8:30 a.m. to 5:30 p.m. Sunday through Wednesday. *Admission to the general and section sessions and exhibits areas is by badge only.*

QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION. (a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association or A.M.A. membership card.) (b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. (A membership card of the Student American Medical Association or letter from their dean's office.) (c) Medical secretaries will be admitted upon presentation of a letter from the physician-employer. (d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer. (e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), student nurses, x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification. (f) *All questions on admission will be passed upon by a member of the Committee on Registration who will be present at the desk.*

Other Meetings and Entertainment

• SUNDAY, FEBRUARY 22

Woman's Auxiliary to the California Medical Association Reception—Gold Ball Room, Sheraton-Palace Hotel—6:00-7:30 p.m.—Honoring Mrs. Francis E. West, wife of the President of the C.M.A., and Mrs. Newell Jones, President of the Woman's Auxiliary. All doctors and their wives are cordially invited.

C.M.A. Section on Allergy and California Society of Allergy Luncheon and Business Meeting—Whitcomb Hotel: California Room, 12:00 noon.

C.M.A. Section on Allergy and California Society of Allergy Reception and Dinner—Fairmont Hotel: 7:30 p.m., Reception, Hunt Room; Dinner at 8:30 p.m., Venetian Room.

C.M.A. Section on Orthopedics Luncheon—English Room, Sheraton-Palace Hotel, 12:00 Noon.

C.M.A. Section on Physical Medicine Luncheon and Meeting—Room 2064, Sheraton-Palace Hotel, 12:00 Noon.

• MONDAY, FEBRUARY 23

Bureau of Medical Economics — Conference and Lunch—Room 2053, 10:00 a.m. to 4:00 p.m.

• TUESDAY, FEBRUARY 24

PRESIDENT'S DINNER DANCE—Garden Court, Sheraton-Palace Hotel, 8:00 p.m. Formal dress optional. Tickets on sale at the C.M.A. Information Desk at the Sheraton-Palace Hotel.

C.M.A. Past President's Lunch—Room 2051, Sheraton-Palace Hotel, 12:15 p.m.

California Academy of Preventive Medicine Dinner—Room 2127, Sheraton-Palace Hotel, 6:30 p.m.

State Board of Public Health—Room 2064, Sheraton-Palace Hotel, 10:00 a.m.

CANCER COMMISSION
CALIFORNIA MEDICAL ASSOCIATION

PRE-CONVENTION CONFERENCES

SAN FRANCISCO • SATURDAY, FEBRUARY 21

Radiology

Concert Room, Sheraton-Palace Hotel

Chairman........................Louis J. Bonann, M.D., Los Angeles
Secretary.....................Merrell A. Sisson, M.D., San Francisco

DIAGNOSTIC SESSION—9:00 a.m. to noon

Twelve diagnostic cases with histories and films will be presented. Cases have been selected to illustrate specific problems in the radiological and clinical diagnosis of cancer. Audience participation and discussion are urgently requested.

THERAPY SESSION—2:00 p.m. to 4:30 p.m.

Five cases with specific therapy problems will be presented. The audience is asked to participate actively.

Pathology

9:15 a.m. to noon • 2:00 p.m. to 4:30 p.m.

Gold Ball Room, Sheraton-Palace Hotel

Moderator: STUART LINDSAY, M.D., San Francisco

The Pre-Convention Conference on the Tumors of the Thyroid will be conducted under the chairmanship of Robert W. Huntington, Jr., M.D., Bakersfield.

Members who wish to attend this conference are requested to register now with Weldon K. Bullock, M.D., Registrar, Tumor Tissue Registry, C.M.A. Cancer Commission, Los Angeles County Hospital, 1200 North State Street, Los Angeles 33.

7:00 p.m.

Sheraton-Palace Hotel

Dinner meeting of the California Society of Pathologists. For reservations contact Ernest E. Simard, M.D., Secretary, 829 Cass Street, Monterey.

Cancer Commission Dinner

6:30 p.m.—Forty-Niners Room (2060), Sheraton-Palace Hotel

Annnual Dinner Meeting of the Cancer Commission and Advisory Committee.

5 POSTGRADUATE COURSES

Presented by California Medical Association in cooperation with University of California, San Francisco, Seymour M. Farber, M.D., Assistant Dean for Continuing Medical Education; and Stanford University, Lowell R. Rantz, M.D., Associate Dean and Director, Postgraduate Medical Education.

Out-of-State Faculty—Guests of the California Medical Association:

EDWIN B. ASTWOOD, M.D., Professor of Medicine, Tufts College Medical School, Boston, Massachusetts.

C. ROLLINS HANLON, M.D., Professor of Surgery, Director Department of Surgery, St. Louis University School of Medicine, St. Louis, Missouri.

1. Postgraduate Conference in Ophthalmology

Saturday, February 21

LANE HALL, STANFORD UNIVERSITY SCHOOL OF MEDICINE

Program planned by Division of Ophthalmology, Stanford University School of Medicine.

Sponsored by California Medical Association Section on Ophthalmology: O. Ralph Tanner, M.D., Chairman; A. Ray Irvine, Jr., M.D., Secretary; Earle H. McBain, M.D., Assistant Secretary.

Time: Saturday, February 21, 1959, 9:00 a.m.-1:00 p.m.

Fee: $10.00.

The conference will consist principally of presentation and discussion of selected cases in a number of areas of ophthalmology. The program will include the following:

Chairman: Dohrmann Pischel, M.D., Chief, Division of Ophthalmology.

1. **Clinical Problems Associated with the Handling of Neurological Diseases Encountered in Ophthalmology.**
2. **The Management of Endocrine Exophthalmos.**
3. **Plastic Problems in Ophthalmology.**

2. Neurology for Physicians in Practice

Saturday and Sunday, February 21 and 22

STANFORD UNIVERSITY HOSPITAL

Program planned by Department of Neurology, Stanford University School of Medicine.

Sponsored by California Medical Association Section on Psychiatry and Neurology: Chairman: Elinor R. Ives, M.D., Los Angeles; and Section on General Practice, Chairman: Howard E. Horner, M.D., Los Angeles.

Time: Saturday and Sunday, February 21, 22, 1959, 9:00 a.m.-12:00 noon and 1:00 p.m.-4:00 p.m.

Fee: $35.00.

Instructional Staff:

Henry S. Colony, M.D., Clinical Instructor in Medcine (Neurology).

Knox H. Finley, M.D., Associate Professor of Medicine (Neurology).

Franklyn C. Hill, Jr., M.D., Resident in Neurology.

W. W. Hofmann, M.D., Assistant Professor of Medicine (Neurology).

Gordon Mulder, M.D., Assistant Resident in Neurology.

H. W. Newman, M.D., Professor of Medicine (Neurology).

W. H. Pennell, M.D., Clinical Instructor in Medicine (Neurology).

James K. Smith, M.D., Clinical Instructor in Medicine (Neurology).

Leon Whitsell, M.D., Assistant Clinical Professor of Medicine.

This series of talks, clinics and demonstrations is being offered for the first time at Stanford University Hospital and is designed to provide a practical outline of current methods of neurological diagnosis and treatment. The symposium will be built around the neurological examination and the more commonly encountered neurological conditions.

SATURDAY, FEBRUARY 21

9:00—**Technic of Neurological Examination—demonstration of simplified methods—explanation of important signs.**

10:00—**Interpretation of Findings—correlations, anatomical review, the up-going toe, sensory findings, what they mean.**

11:00—**The General Problem of Weakness: primary muscle disease, disease of lower neurone, disease of neuromuscular junction, systemic diseases, pseudo weakness, discussion of differential points and treatment.**

1:00—**Clinic: Parkinsonism**—demonstration, classification, discussion of treatment.

2:00—**The Problem of Seizures.** Interesting clinical features. Brief sketches of newer physiological ideas. Diagnosis and treatment.

3:00—**The Demyelinating Diseases.** In children—in adults. How to deal with the patient who houses the disease. What is multiple sclerosis? Current research on how to deal with the disease.

SUNDAY, FEBRUARY 22

9:00—**Interpretation of Findings.** Cranial nerve palsies—loss of vision.

10:00—**The General Problems in the "Stroke Syndrome."** When is a stroke not a CVA? The newer concepts regarding the great vessels of the nervous system. Prognosis. Treatment.

11:00—**The Patient with "Dizziness."** Clarification of vertigo—causes and differential points. Treatment.

1:00—**Clinic. Myasthenia gravis. Spinal cord tumor.**

2:00—**Headache.** What kind is it? What can be done? Remarks on physiology.

3:00—**What Laboratory Procedures to Order for the Neurological Problem.** What the EEG tells. When to do an L.P. Special Studies.

3. Treatment of Hernia

Sunday, Monday and Tuesday, February 21, 22 and 23—9 a.m. to Noon

STANFORD UNIVERSITY HOSPITAL

Program planned by Department of Surgery, Stanford University School of Medicine.

Sponsored by California Medical Association Section on Surgery: Chairman: Edwin G. Clausen, M.D., Oakland; and Section on General Practice, Chairman: Howard E. Horner, M.D., Los Angeles.

Time: Sunday, Monday and Tuesday, February 22, 23 and 24, 1959, 9:00 a.m. to 12:00 noon.

Fee: $25.00.

Instructional Staff:

California Medical Association Guest:

C. Rollins Hanlon, M.D., Professor of Surgery, Director Department of Surgery, St. Louis University School of Medicine, St. Louis, Missouri.

Stanford University:

Philip J. Bailey, M.D., Associate Clinical Professor of Surgery (Anesthesiology).

Frank Blaisdell, M.D., Chief Resident, Department of Surgery, Stanford Service, San Francisco County Hospital.

Roy B. Cohn, M.D., Associate Professor of Surgery.

John E. Connolly, M.D., Instructor in Surgery.

Pieter A. deVries, M.D., Clinical Instructor in Surgery.

John M. Erskine, M.D., Assistant Clinical Professor of Surgery.

Chester Herrod, M.D., Clinical Instructor in Surgery.

Victor Richards, M.D., Professor of Surgery.

Willis Schaupp, M.D., Clinical Instructor in Surgery.

Philip R. Westdahl, M.D., Assistant Clinical Professor of Surgery.

The first day will be devoted to demonstration of the anatomy of the inguinal rings and abdominal wall on the cadaver and to a discussion of anesthesia suitable for patients undergoing hernioplasty. The second and third days will include presentation of cases and clinically oriented discussions of the various forms of hernia and their treatment.

SUNDAY, FEBRUARY 22

9:00—**Anatomy of Inguinal Rings and Abdominal Wall.** Cadaver demonstration (for groups of ten)—Chester Herrod, M.D., Pieter A. deVries, M.D., John M. Erskine, M.D., Willis Schaupp, M.D., Frank W. Blaisdell, M.D., John E. Connolly, M.D.

11:00—**Anesthesia for Patients with Hernia**—Philip J. Bailey, M.D.

MONDAY, FEBRUARY 23

9:00—**Clinical Problems in Direct and Indirect Inguinal Hernia**—C. Rollins Hanlon, M.D.

11:00—**Femoral Hernia**—Victor Richards, M.D.

TUESDAY, FEBRUARY 24

9:00—**Ventral Hernia—Umbilical Hernia**—Roy B. Cohn, M.D.

10:30—**Sliding Recurrent Rare Hernia—Herniae in Infants**—Philip R. Westdahl, M.D.

11:00—**Panel discussions.**

4. Medicine in the Jet and Space Age

Sunday, February 22

UNIVERSITY OF CALIFORNIA MEDICAL CENTER

Program planned by Department of Continuing Medical Education, University of California School of Medicine, San Francisco.

Time: Sunday, February 22, 1959, 9:00 a.m.-12:30 p.m. and 1:30-5:00 p.m.

Fee: $15.00.

Instructional Staff:

A. Buchanan Barbour, M.D., Director, Medical Services, British European Airways, London, England.

Clinton G. Beirne, M.D., Clinical Instructor in Dermatology.*

Seymour M. Farber, M.D., Associate Clinical Professor of Medicine.*

Mr. Stanley Lippert, Coordinator, Human Factors Group, Douglas Aircraft Company, Santa Monica.

Carlos S. Mundt, M.A., Professor of Astronomy and Mathematics, San Francisco State College.

Nello Pace, Ph.D., Professor of Physiology.*

Francis B. Quinn, Jr., M.D., Division of Head and Neck Surgery, U.C.L.A.; Lytton Industries, Beverly Hills.

Lt. Col. Robert Stonehill, Chief, Pulmonary Disease Section, USAF Hospital, Lackland Air Force Base, Texas.

Roger H. L. Wilson, M.D., Assistant Clinical Professor of Medicine.*

Chairman: Roger H. L. Wilson, M.D.

Co-Chairman: Clinton G. Beirne, M.D.

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*University of California School of Medicine, San Francisco.

The last decade has seen tremendous strides in solving many of the medical difficulties associated with flight in jets and into space. The physician has many interests in both the medical and non-medical implications of such travel. Outstanding participants have been invited so that they may give insights into this exciting field. Ample time has been allotted for questions and answers between audience and speaker.

SUNDAY MORNING, FEBRUARY 22

Medicine in the Jet Age

Chairman: Seymour M. Farber, M.D.

8:30—**Registration.**

9:00—**The Passenger**—A. Buchanan Barbour, M.D.

9:45—**The Patient**—Lt. Col. Robert Stonehill.

10:30—**Recess.**

10:45—**The Journey**—Mr. Stanley Lippert.

11:30—**Panel Discussion.**

Moderator: Roger H. L. Wilson, M.D.

SUNDAY AFTERNOON, FEBRUARY 22

Space Flight—Man in Vacuum

Chairman: Clinton G. Beirne, M.D.

1:30—**The Passenger**—Nello Pace, Ph.D.

2:15—**The Vehicle**—Francis B. Quinn, Jr., M.D.

3:00—**Recess.**

3:15—**The Journey**—Carlos S. Mundt, M.A.

4:00—**Panel Discussion.**

Moderator: Clinton G. Beirne, M.D.

5. Family Endocrinology

Sunday and Monday, February 22 and 23

UNIVERSITY OF CALIFORNIA MEDICAL CENTER

Program planned by Department of Continuing Medical Education, University of California School of Medicine, San Francisco.

Sponsored by California Medical Association Sections on Obstetrics and Gynecology, Pediatrics, Internal Medicine and General Practice.

Time: Sunday, February 22, 1959, 9:00 a.m.-12:30 p.m. and 2:00-5:00 p.m. and Monday, February 23, 1959, 9:00-12:00 a.m.

Fee: $25.00.

Instructional Staff:

Guest of California Medical Association:

Edwin B. Astwood, M.D., Professor of Medicine, Tufts College Medical School, Boston.

University of California School of Medicine:

William C. Deamer, M.D., Professor of Pediatrics.

Dorothy Eichorn, Ph.D., Assistant Research Psychologist, Institute of Human Development.

Roberto F. Escamilla, M.D., Clinical Professor of Medicine.

Peter H. Forsham, M.D., Professor of Medicine and Pediatrics; Director of Metabolic Unit.

Alan Goldfien, M.D., Assistant Professor of Medicine in Obstetrics and Gynecology.

Gilbert S. Gordan, M.D., Associate Professor of Medicine.

Edward C. Hill, M.D., Assistant Professor of Obstetrics and Gynecology.

Allen T. Hinman, M.D., Assistant Clinical Professor of Medicine; Chairman, California Medical Association Section on Internal Medicine.

Frank Hinman, Jr., M.D., Associate Clinical Professor of Urology.

Frederick S. Howard, M.D., Assistant Clinical Professor of Urology.

John J. Hutchings, M.D., Instructor in Pediatrics.

Percy H. Jennings, Jr., M.D., Assistant Clinical Professor of Pediatrics; Chairman, California Medical Association Section on Pediatrics.

James Merrill, M.D., Assistant Professor of Obstetrics and Gynecology.

Donald R. Nelson, M.D., Associate Clinical Professor of Obstetrics and Gynecology; Secretary, California Medical Association Section on Obstetrics and Gynecology.

Edmund W. Overstreet, M.D., Professor of Obstetrics and Gynecology.

Ernest W. Page, M.D., Professor and Chairman of Obstetrics and Gynecology.

William A. Reilly, M..D, Clinical Professor of Pediatrics.

This Postgraduate Course is designed to assist the practitioner in reviewing advances in this rapidly moving field. The first portion of each session will be devoted to formal presentations and will be followed by informal panel discussions and case presentations. There will be sufficient opportunity for questions and exchange of views between audience and speakers.

SUNDAY MORNING, FEBRUARY 22

Chairman: Donald R. Nelson, M.D.

9:00—**Uses of Gonadal Hormones in Obstetrics and Gynecology**—Edmund W. Overstreet, M.D.

9:45—**Menstrual Disorders and Their Clinical Management**—Ernest W. Page, M.D.

10:30—Recess.

10:45—**Panel Discussion of Practical Problems in Gynecologic Endocrinology.**

Moderator: Ernest W. Page, M.D.

Panel: Edmund W. Overstreet, M.D., Edward C. Hill, M.D., Alan Goldfien, M.D., James Merrill, M.D.

SUNDAY AFTERNOON, FEBRUARY 22

Chairman: Percy H. Jennings, Jr., M.D.

2:00—**Endocrine Evaluation of the Short Child**—John J. Hutchings, M.D.

2:45—**Steroid Therapy in Endocrine and Non-Endocrine Conditions**—Peter H. Forsham, M.D.

3:30—Recess.

3:45—**Panel on Disturbances of Sex Differentiation.**

Moderator: William C. Deamer, M.D.

Panel: Frank Hinman, Jr., M.D., Frederick S. Howard, M.D., William A. Reilly, M.D., John J. Hutchings, M.D., Edwin B. Astwood, M.D.

MONDAY MORNING, FEBRUARY 23

Chairman: Allen T. Hinman, M.D.

9:00—**Newer Hormonal Preparations**—Roberto F. Escamilla, M.D.

9:30—**Endocrinology Changes in the Aging**—Gilbert S. Gordan, M.D.

10:00—Recess.

10:15—**Panel on Common Endocrinology Problems of the Teenager.**

Moderator: Allen T. Hinman, M.D.

Lecturer: Edwin B. Astwood, M.D.

Discussants: William C. Deamer, M.D., Gilbert S. Gordan, M.D., Dorothy H. Eichorn, Ph.D.

APPLICATION FOR ENROLLMENT

Mail to: Postgraduate Activities, California Medical Association
2975 Wilshire Boulevard, Los Angeles 5, California

With check or money order in the amount of $__________made payable to the California Medical Association. (Circle the number of the course you plan to attend.)

Name__________

Address__________

I am in General Practice__________I limit my practice to__________

Medical School attended__________Year of graduation__________

1. **Ophthalmology**	Saturday, February 21, 1959	$10.00
2. **Neurology for Physicians in Practice**	Saturday, Sunday, February 21, 22, 1959	$35.00
3. **Treatment of Hernia**	Sunday, Monday, Tuesday, February 22, 23, 24, 1959	$25.00
4. **Medicine in the Jet and Space Age**	Sunday, February 22, 1959	$15.00
5. **Family Endocrinology**	Sunday, Monday, February 22, 23, 1959	$25.00

SCIENTIFIC SESSIONS

GENERAL MEETINGS

FIRST GENERAL MEETING

MONDAY, FEBRUARY 23

2:00—Polk Hall, Civic Auditorium

2:00—Address of Welcome—Francis E. West, M.D., President of the California Medical Association.

2:15— **Symposium**

The Diagnosis and Management of Upper Gastrointestinal Bleeding

Moderator: Edwin G. Clausen, M.D., Oakland

Surgeon: Carleton Mathewson, M.D., Professor of Surgery, Stanford University School of Medicine, San Francisco.

Internist: Albert M. Snell, M.D., Department of Medcine, Palo Alto Clinic, Clinical Professor of Medicine, University of California School of Medicine, San Francisco.

Radiologist: Ross Golden, M.D., Visiting Professor of Radiology, University of California School of Medicine, Los Angeles.

SECOND GENERAL MEETING

TUESDAY, FEBRUARY 24

Vallecitos Atomic Laboratory Tour

12:00 Noon—Main Entrance, Civic Auditorium

Chairman: Allen T. Hinman, M.D., San Francisco

Noon—Buses depart Civic Auditorium, main entrance, Grove Street.

12:45—Arrive Castlewood Country Club.

1:00—Luncheon.

2:00—**Discussion of Vallecitos Atomic Laboratory and private industry's achievement in atomic energy field.**

3:00—Buses depart Castlewood Country Club.

3:15—Arrive Vallecitos Atomic Laboratory.

3:15—Tour of Atomic Laboratory.

4:45—Depart for San Francisco.

6:00—Arrive San Francisco.

Tickets: $5.00 per person, which includes refreshments and luncheon. Available at Registration Desk, Civic Auditorium.

Tour sponsored by General Electric Company and Pacific Gas and Electric Company.

PRESIDENT'S DINNER DANCE

TUESDAY, FEBRUARY 24

Garden Court, Sheraton-Palace Hotel, 8:00 p.m.

Formal dress optional

Tickets will be on sale at the C.M.A. Information Desk at the Sheraton-Palace Hotel

GENERAL SURGERY

Chairman..................Edwin G. Clausen, M.D., Oakland
Secretary...............William F. Pollock, M.D., Santa Monica
Assistant Secretary........Philip R. Westdahl, M.D., San Francisco

EDWIN G. CLAUSEN
Chairman

WILLIAM F. POLLOCK
Secretary

SUNDAY, FEBRUARY 22

9:00—Room 402, Civic Auditorium

9:00—**Carcinoma of the Tongue—Results of Surgical Treatment**—Henry Schwarz II, M.D., and Julian M. Sether, M.D., Los Angeles.

Discussion opened by S. L. Perzik, M. D., Los Angeles.

9:15—**Carcinoma of the Lung in the Tuberculous Patient** — Neal C. Hamel, M.D., John N. Briggs, M.D., and Louis G. Ludington, M.D., Encino.

Discussion by H. Brodie Stephens, M.D., San Francisco.

9:30—**Uretero-ileal Anastomosis**—William Wallace Scott, M.D., and Thomas A. Stamey, M.D., Baltimore, by invitation.

10:00—**Chairman's Address**—Edwin G. Clausen, M.D., Oakland.

10:30—**Anesthesia and the Practice of Surgery**—Stuart Cullen, M.D., San Francisco, by invitation.

10:50—**Recurrent Carcinoma of the Rectum**—B. Richard Jackson, M.D., and William H. Daniel, M.D., Los Angeles.

Discussion opened by Walter Birnbaum, M.D., San Francisco.

11:05—**Preoperative, Operative and Postoperative Visualization of the Biliary Tract**—C. Rollins Hanlon, M.D., St. Louis, by invitation.

11:35—**The Need for Complete Exclusion in Cases of Complicated Regional Enteritis**—Luis Arismendi, M.D., Stockton; Major Joseph L. Hannon, MC, USA, and Colonel Herbert T. Berwald, MC, USA, San Francisco, both by invitation; and Carleton Mathewson, M.D., San Francisco.

Discussion opened by Russell Klein, M.D., San Rafael.

11:50—**Business Meeting and Election of Officers.**

MONDAY, FEBRUARY 23

2:00—Polk Hall, Civic Auditorium

Symposium

The Diagnosis and Management of Upper Gastrointestinal Bleeding

For program, see General Meetings.

TUESDAY, FEBRUARY 24

Noon—Main Entrance, Civic Auditorium

Vallecitos Atomic Laboratory Tour

Fee $5.00—Tickets on sale at Registration Desk.

For program, see General Meetings.

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

INTERNAL MEDICINE

Chairman................Allen T. Hinman, M.D., San Francisco
Secretary..................Edward Shapiro, M.D., Beverly Hills
Assistant Secretary.......Charles D. Armstrong, M.D., Menlo Park

ALLEN T. HINMAN
Chairman

EDWARD SHAPIRO
Secretary

SUNDAY, FEBRUARY 22

9:00—Room 301, Civic Auditorium

Joint Meeting with the Section on Eye

Chairman: Edward Shapiro, M.D., San Francisco

9:00—**The Eye and Hyperthyroidism**—Edwin B. Astwood, M.D., Boston, Massachusetts, by invitation.

9:30—**Round Table Discussion.**

Moderator: Paul Starr, M.D., Pasadena

Members of the Panel:

Internists: Edwin B. Astwood, M.D., Boston, by invitation; and Robert Lowrey, M.D., Glendale.

Ophthalmologists: Jerome Bettman, M.D., and Max Fine, M.D., San Francisco.

10:30— **Panel Discussion**

The Eye and Collagen Diseases

1. **Medical Aspects**—Edmund Dubois, M.D., Beverly Hills.
2. **Fundus Picture**—Alan J. Rosenberg, M.D., San Francisco.
3. **Pathology**—Michael J. Hogan, M.D., San Francisco.

MONDAY, FEBRUARY 23

2:00—Polk Hall, Civic Auditorium

The Diagnosis and Management of Upper Gastrointestinal Bleeding

For program, see General Meetings.

TUESDAY, FEBRUARY 24

9:00—Room 403, Civic Auditorium

Chairman: Allen T. Hinman, M.D., San Francisco

9:00—**The Advantages of Heparin as the Sole Anticoagulant in Acute Myocardial Infarction**—Hyman Engelberg, M.D., Beverly Hills.

Four years' study involving 36 private patients constitutes the experience to be reported, plus data from a controlled study done at the Los Angeles County Hospital with Drs. George Griffith and Willard Zinn.

9:15—**Fat of Fancy—Myths and Myocardial Infarction**—Raymond E. Weston, M.D., Beverly Hills.

Provocative data analyzing the pathogenesis and prognosis of atherosclerosis. The potentialities of diets low in saturated fats; unsaturated fats; sitosterol; pyrodoxine; estrogen; and thyroid derivatives as regimens for prophylaxis or treatment will be evaluated.

9:30—**The Treatment of Gout—A Comprehensive Approach**—William C. Kuzell, M.D. and W. Edward Naugler, M.D., San Francisco.

The acute attack is more amenable to standardization of treatment than chronic gouty arthritis. Uricosuric agents are only occasionally needed to prevent acute recurrences. Treatment to alleviate chronic gouty arthritis, to reduce tophi, and to preserve renal function includes the use of anti-inflammatory and uricosuric agents.

9:45—**The Current Status of Chemotherapy in Malignant Disease**—Byron E. Hall, M.D., San Francisco.

Actual cases will be used to present the thesis of the extreme variability of the growth-inhibiting properties of a number of chemical agents in unrelated malignant disease. It is important to assay each new agent against a variety of neoplasms, and at variable dosage levels in order to treat the patient fully.

10:00—**Redistribution of the Blood-Supply of the Heart, Brain, Liver and Kidney by Vasopressor Drugs in Shock**—Eliot Corday, M.D., Beverly Hills; John H. Williams, M.D., Boston, by invitation, and Lauro B. De Vera, M.D., Quezon City, Manila, P.I., by invitation.

Although vasopressor drugs may be life-saving in the treatment of shock, what of the danger of hepatic and renal ischemia and necrosis? In dogs, simultaneous blood-flow of the heart, liver, kidney and brain was measured during shock and after treatment by vasopressor drugs.

10:15—**Obesity and Fat Metabolism**—Edwin B. Astwood, M.D., Boston, Mass., by invitation.

Dr. Astwood, a graduate of McGill University Faculty of Medicine, is Professor of Medicine at Tufts College Medical School and is Senior Physician in Endocrinology at the New England Medical Center Hospital. In 1949, he was awarded the John Phillips Memorial Medal by the American College of Physicians.

10:45—**Intermission** (10 minutes only. Please return promptly.)

10:55—**Business Meeting and Election of Officers.**

11:00—**The Evaluation of Pulmonary Hypertension in Mitral Stenosis: A Comparison of Clinical, Roentgenological and Cardiac-Catheterization Data**—Richard S. Cosby, M.D., Pasadena.

Pulmonary hypertension owing to mitral block is analyzed in 50 patients from the history, physical signs, radiograph of the thorax, and cardiac catheterization. The last procedure, this study suggests, is needed only in one-third of the subjects when the ECG and X-ray are thoroughly studied.

11:15—**Serum Insulin-Like Activity of Normal and Diabetic Humans**—Paul Beigelman, M.D., Los Angeles.

A method of bio-assay for insulin-like activity has been devised (utilizing glucose-uptake by rat epididymal-adipose tissue) that is sensitive to 0.0001 unit of insulin per ml. Studies of normals and cases of diabetic coma are compared.

11:30—**Problems in the Diagnosis of Thyroid Disease**—Boris Catz, M.D., Beverly Hills and Donald W. Petit, M.D., Pasadena.

The definition of thyroid function is often difficult, especially in infectious hepatitis, pregnancy, nephrosis and iodogenic goiter. Cases will be shown that required, for correct diagnosis, various combinations of P.B.I., I^{131} uptake, T.S.H., B.M.R., cholesterol suppression studies with tri-iodo-thyronine, and thyroxine-binding component.

11:45—**A Clinical and Physiological Evaluation of the Hyperventilation Syndrome** — Bernard I. Lewis, M.D., Palo Alto.

Observations have delineated a chronic hyperventilation pattern that occurs more frequently than the episodic variety. The study of 250 patients by a new instantaneous recording of cardiac, pulmonary and acid-base balance alterations leads to effective treatment.

TUESDAY, FEBRUARY 24

Noon—Main Entrance, Civic Auditorium

Vallecitos Atomic Laboratory Tour

Fee $5.00—Tickets on sale at Registration Desk.

For program, see General Meetings.

QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION

(a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association or A.M.A. membership card.)

(b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. (A membership card of the Student American Medical Association or letter from their dean's office.)

(c) Medical secretaries will be admitted upon presentation of a letter from the physician employer.

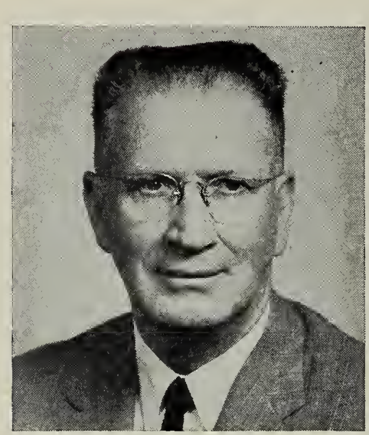
(d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer.

(e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), student nurses, x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification.

(f) *All questions on admission will be passed upon by a member of the Committee on Registration who will be present at the desk.*

GENERAL PRACTICE

Chairman................Howard E. Horner, M.D., Los Angeles
Secretary........................James S. Eley, M.D., Eureka
Assistant Secretary.........Floyd K. Anderson, M.D., Los Angeles



HOWARD E. HORNER
Chairman

JAMES S. ELEY
Secretary

The Section on General Practice will not conduct a scientific program in order not to conflict with the Postgraduate Education Courses and the General Meetings which the section helped to arrange.

SUNDAY and MONDAY, FEBRUARY 22 and 23

University of California Medical Center
Second and Parnassus Avenues

Postgraduate Course in Endocrinology
Co-sponsored by Section on General Practice

Sunday

9:00—Female Endocrinology.

2:00—Pediatric Endocrinology.

Monday

9:00—Adolescent and Adult Endocrinology.

For curriculum and registration information, see pages 14 and 15.

MONDAY, FEBRUARY 23

1:45—Polk Hall, Civic Auditorium

1:45—A Business Meeting for the Election of Officers and Preliminary Planning for the 1960 Scientific Program of the General Practice Section.

2:00— **Symposium**

The Diagnosis and Management of Upper Gastrointestinal Bleeding

For program, see General Meetings.

TUESDAY, FEBRUARY 24

Noon—Main Entrance, Civic Auditorium

Vallecitos Atomic Laboratory Tour

Fee $5.00—Tickets on sale at Registration Desk. For program, see General Meetings.

REGISTRATION

Registration and information desks are located in the Main Arena, Civic Auditorium. *All members, guests, and visitors are requested to register immediately on arrival.* There is no charge for registration except for Postgraduate Courses. Registration desks are open 8:30 a.m. to 5:30 p.m. Sunday through Wednesday. *Admission to the general and section sessions and exhibit areas is by badge only.*

ALLERGY

Chairman . . . . Albert Rowe, Jr., M.D., Oakland
Secretary . . . . George F. Harsh, M.D., San Diego

ALBERT ROWE, JR.
Chairman

GEORGE F. HARSH
Secretary

SUNDAY, FEBRUARY 22

Noon—California Room, Whitcomb Hotel

12:00—**Luncheon and Business Meeting**—Sponsored jointly by the Section on Allergy and the California Society of Allergy.

SUNDAY, FEBRUARY 22

2:00—Room 404, Civic Auditorium

2:00—**Bronchial Asthma—Air Trapping as an Aggravating Factor**—Edward M. Matzger, M.D., San Francisco.
Discussion.

2:30—**Spirometric Evaluation of a Theophylline Solution in Treating Asthma**—Frederic W. Farrar, M.D., and Walter R. MacLaren, M.D., Pasadena.
Discussion.

3:00—**Correlation of Intradermal Food Skin Tests for Allergenicity**—Milton Millman, M.D., and Robert A. Richmond, M.D., San Diego.
Discussion.

3:30—**Serotonin—Its Possible Relationship to Allergy**—M. Coleman Harris, M.D., San Francisco.
Discussion.

4:00—**Chairman's Address**—Albert Rowe, Jr., M.D., Oakland.

7:00—Fairmont Hotel, Hunt Room

7:00—**Reception and Dinner**—Sponsored jointly by Section on Allergy and California Society of Allergy.

PRESIDENT'S DINNER DANCE

TUESDAY, FEBRUARY 24

Garden Court, Sheraton-Palace Hotel, 8:00 p.m.

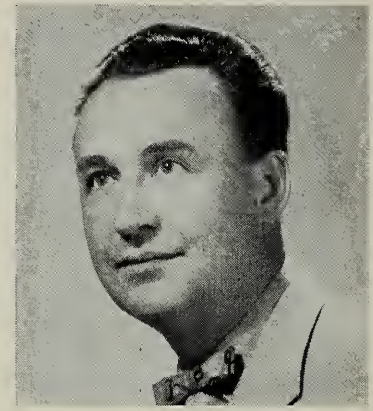
Formal dress optional

Tickets will be on sale at the C.M.A. Information Desk at the Sheraton-Palace Hotel

ANESTHESIOLOGY

Chairman................John S. Hattox, Jr., M.D., San Diego
Secretary..................Charles D. Anderson, M.D., Oakland
Assistant Secretary...........Roger W. Ridley, M.D., Riverside

JOHN S. HATTOX, JR.
Chairman



CHARLES D. ANDERSON
Secretary

WEDNESDAY, FEBRUARY 25

2:00—Room 402, Civic Auditorium

2:00—**The Use of Nikedimide in Barbiturate Intoxication and in Terminating Barbiturate Anesthesia**—Milton J. Marmer, M.D., Beverly Hills.

When Nikedimide was used on 400 patients after barbiturate anesthesia, almost all showed signs of awakening within five minutes. Five patients in coma from barbiturate intoxication were successfully resuscitated.

2:20—**Business Meeting and Election of Officers.**

2:50—**Intermission.**

3:00— **Symposium**

Contemporary Standards of the Practice of Anesthesiology

Moderator: Douglass H. Batten, M.D., San Diego

Members of the Symposium: Forrest E. Leffingwell, M.D., Pasadena, Grant Fletcher, M.D., Monterey, Edward J. Twigg, M.D., Oakland; and Stuart C. Cullen, M.D., San Francisco, by invitation.

3:00—**Introduction**—Douglass H. Batten, M.D., San Diego.

Anesthesiology as a young specialty has undergone a rapid development and accompanying this there has been an even more rapid upgrading of the standards of practice.

3:10—**The Anesthesiologist's Responsibilities**—Forrest E. Leffingwell, M.D., Pasadena.

The anesthesiologist plays many roles: Physician, physiologist, consultant. In these roles he has responsibilities to the patient, surgeon, hospital and community.

3:25—**The Anesthesiologist's Tools**—Grant Fletcher, M.D., Monterey.

The chaff of older and present day tools will be condemned while the worthwhile tools of the past and present will be emphasized.

3:40—**The Legal Restraints and Constraints**—Edward J. Twigg, M.D., Oakland.

The thesis that there is no inherent safety in an anesthetic technique will be developed by presentation of actual litigation cases.

3:55—**The Responsibilities of Residency Programs**—Stuart C. Cullen, M.D., San Francisco, by invitation.

Residency programs have the dual responsibility of training physicians according to acceptable standards of practice and to upgrading standards generally by good teaching techniques.

EMERGENCY CALLS AND MESSAGES

Each physician should notify his own secretary regarding the *exact* section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will *attempt* to transmit messages to the individual physician.

In case of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the local County Medical Societies.

DERMATOLOGY AND SYPHILOLOGY

Chairman................Frances M. Keddie, M.D., Palo Alto
Secretary....................Herbert L. Joseph, M.D., Vallejo
Assistant Secretary...........Edward L. Laden, M.D., Inglewood

FRANCES M. KEDDIE
Chairman

HERBERT L. JOSEPH
Secretary

SUNDAY, FEBRUARY 22

9:00—Polk Hall, Civic Auditorium

9:00—**Chairman's Address: Some Observations on a Yeast-like Fungus Grown from Cases of Pityriasis Versicolor**—Frances M. Keddie, M.D., and Bart J. Spence, Jr., M.D., Palo Alto; and Dorothy Liebes, B.A., Palo Alto, by invitation.

9:20—**The Nature of the Seborrheic Diathesis**—Jud R. Scholtz, M.D., Pasadena.
Discussion.

9:40—**Skin Problems in the Ileostomy Patient**—Eugene M. Farber, M.D., San Francisco; and Samuel I. Roland, M.D., Palo Alto, by invitation; and Robert McNamara, M.D., San Francisco, by invitation.
Discussion.

10:00—**Newer Drug Therapy in Dermatology**—Rees B. Rees, M.D., and James H. Bennett, M.D., San Francisco; and Max R. Greenlee, Jr., M.D., San Francisco, by invitation.
Discussion.

10:20—**Recess.**

10:30— **Symposium**

Light Sensitivity Dermatoses

Moderator: Thomas H. Sternberg, M.D., Los Angeles

10:30—**Introduction**—Thomas H. Sternberg, M.D., Los Angeles.

10:35—**Histopathology of the Light Sensitivity Dermatoses**—Edwin T. Wright, M.D., Los Angeles; and Louis H. Winer, M.D., Beverly Hills.

10:50—**Physics of Ultraviolet Light**—Peter L. Beal, M.D., Redwood City.

11:05—**The Antimalarial Drugs**—John H. Epstein, M.D., San Francisco.

11:20—**8-Methoxypsoralen — A Short Review and Comment**—Sheldon Swift, M.D., Los Angeles, by invitation.

11:35—**Questions from the floor.**

11:50—**Business Meeting and Election of Officers.**

RECEPTION
WOMAN'S AUXILIARY TO THE C.M.A.

SUNDAY, FEBRUARY 22, 6 to 7:30 P.M.

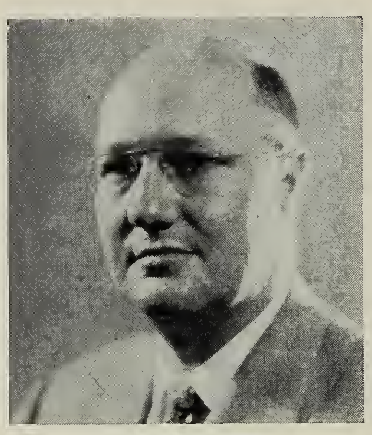
Gold Ball Room, Sheraton-Palace Hotel

Honoring Mrs. Francis E. West and Mrs. Newell Jones

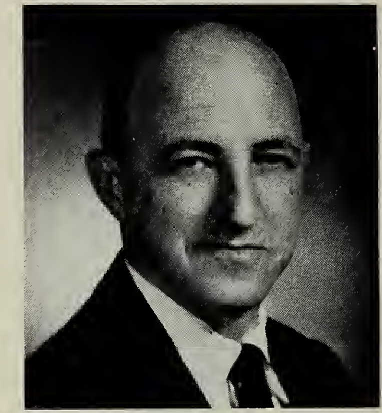
All doctors and their wives are cordially invited

EAR, NOSE AND THROAT

Chairman................Walter E. Heck, M.D., San Francisco
Secretary..................Ewing Seligman, M.D., Beverly Hills
Assistant Secretary........Heinrich W. Kohlmoos, M.D., Oakland



WALTER E. HECK
Chairman



EWING SELIGMAN
Secretary

MONDAY, FEBRUARY 23

9:00—Room 405, Civic Auditorium

9:00—**Tympanotomy—Exploratory "Laparotomy" of the Middle Ear**—Eugene S. Hopp, M.D., San Francisco.
Discussion.

9:30—**Intranasal Injection of Corticosteroids in Nasal Disorders**—Marvin W. Simmons, M.D., Fresno.
Discussion.

10:00—**The Maxillary-Premaxillary Approach to Extensive Nasal Septum Surgery**—Fred W. Beck, M.D., Oakland.
Discussion.

10:30— **Panel Discussion**

Hearing Aids

Moderator: Shirley Harold Baron, M.D., San Francisco

Members of the Panel: Robert C. McNaught, M.D., San Francisco; Walter P. Work, M.D., San Francisco; Hayes A. Newby, Ph.D., Stanford, by invitation; Richard F. Dixon, Ph.D., San Francisco, by invitation.

11:30—**Cysts of the Jaws—Their Classification and Repair**—Jack H. Seltsam, M.D., D.D.S., Los Angeles.
Discussion.

12:00—**Business Meeting and Election of Officers.**

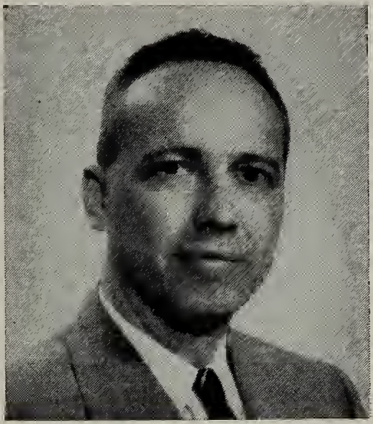
TWO GENERAL MEETINGS

MONDAY, FEBRUARY 23—2:00 p.m., Polk Hall, Civic Auditorium
Diagnosis and Management of Upper Gastrointestinal Bleeding

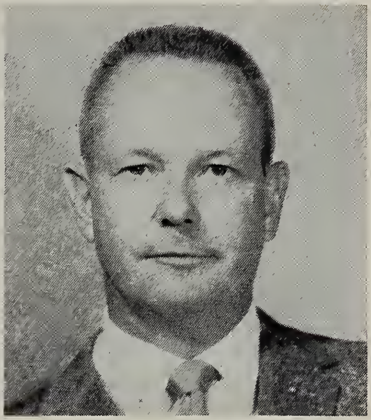
TUESDAY, FEBRUARY 24—NOON, Main Entrance to Civic Auditorium
Vallecitos Atomic Laboratory Tour

EYE

Chairman....................O. Ralph Tanner, M.D., Palo Alto
Secretary.................A. Ray Irvine, Jr., M.D., Los Angeles
Assistant Secretary...........Earle H. McBain, M.D., San Rafael



O. RALPH TANNER
Chairman



A. RAY IRVINE, JR.
Secretary

SATURDAY, FEBRUARY 21

9:00 a.m.-1:00 p.m.—Stanford University School of Medicine
2398 Sacramento Street

Postgraduate Course in Ophthalmology

Co-sponsored by Section on Eye

For curriculum and registration information, see pages 12 and 15

SUNDAY, FEBRUARY 22

9:00—Room 301, Civic Auditorium

Joint Meeting with the Section on Internal Medicine

Chairman: Edward Shapiro, M.D., San Francisco

9:00—**The Eye and Hyperthyroidism**—Edwin B. Astwood, M.D., Boston, Massachusetts, by invitation.

9:30—**Round Table Discussion.**

Moderator: Paul Starr, M.D., Pasadena

Members of the Panel:
Internists: Edwin B. Astwood, M.D., Boston, by invitation; and Robert Lowrey, M.D., Glendale.
Ophthalmologists: Jerome Bettman, M.D., and Max Fine, M.D., San Francisco.

10:30— **Panel Discussion**

The Eye and Collagen Diseases

1. **Medical Aspects**—Edmund Dubois, M.D., Beverly Hills.
2. **Fundus Picture**—Alan J. Rosenberg, M.D., San Francisco.
3. **Pathology**—Michael J. Hogan, M.D., San Francisco.

SUNDAY, FEBRUARY 22

2:00—Room 402, Civic Auditorium

2:00—**Electromyography** — Edward Tamler, M.D., San Francisco.

2:30—**Medical Treatment of Convergent Strabismus**—Robert L. Tour, M.D., San Francisco.

3:00—**Surgical Treatment of Convergent Strabismus**—Floyd Bond, M.D., San Diego.

3:30—**Divergent Strabismus**—Alfred R. Robbins, M.D., Los Angeles.

4:00— **Panel Discussion**

Concomitant Strabismus—Diagnosis and Treatment

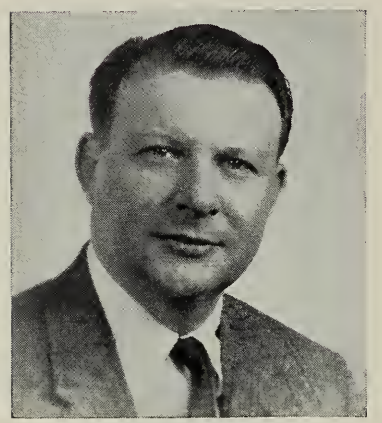
Moderator: Clifford A. Dickey, M.D., San Francisco

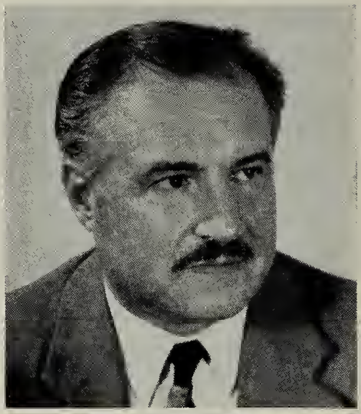
Members of the Panel: Edward Tamler, M.D., and Robert L. Tour, M.D., San Francisco; Floyd Bond, M.D., San Diego; and Alfred R. Robbins, M.D., Los Angeles.

4:30—**Business Meeting and Election of Officers.**

INDUSTRIAL MEDICINE AND SURGERY

Chairman.................Leonard J. Yamshon, M.D., Gardena
Secretary............Gandolph A. Prisinzano, M.D., Sacramento
Assistant Secretary...........Edward J. Zaik, M.D., Los Angeles


LEONARD J. YAMSHON
Chairman


GANDOLPH A. PRISINZANO
Secretary

SUNDAY, FEBRUARY 22

9:00—Room 404, Civic Auditorium

9:00—**Chairman's Address**—Leonard J. Yamshon, M.D., Los Angeles.

9:15—**Are Work Restrictions Justified on Spine X-Ray Findings Alone?**—H. L. Herschensohn, M.D., Santa Monica.

9:35—**Analysis of Sick Leave Experience in Industry**—E. P. Luongo, M.D., Los Angeles.

10:05—**Recess.**

10:25—**Periodic Health Examination—Detection and Health Promotion**—Rodney R. Beard, M.D., San Francisco.

10:45—**The Role and Responsibility of the Attending or Treating Physician in Traffic Accident Injuries**—Carlton C. Purviance, M.D., Vallejo.

11:05—**Granuloma Diseases of the Extremities**—John E. Kirkpatrick, M.D., San Francisco.

11:25—**Diagnosis of Industrial Dermatoses**—Robert C. Vanina, M.D., Sacramento.

11:45—**Business Meeting.**

MONDAY, FEBRUARY 23

9:00—Room 404, Civic Auditorium

Joint Meeting with the Section on Physical Medicine

Chairman: Leonard J. Yamshon, M.D., Los Angeles

Panel Discussion

Traumatic Injuries to the Forearm and Hand

Moderator: David Rubin, M.D., Los Angeles

9:00—**Anatomy of the Forearm and Hand**—David L. Bassett, M.D., Palo Alto.

9:20—**Fractures of the Forearm and Hand and Treatment**—E. R. Schottstaedt, M.D., San Francisco.

9:40—**Soft Tissue Injuries of the Forearm and Hand and Treatment**—Donald R. Pratt, M.D., San Francisco.

10:00—**Anesthesia Treatment Techniques for Injuries of the Forearm and Hand**—Charles D. Anderson, M.D., Oakland.

10:20—**Physical Medicine Treatment Techniques for Injuries of the Forearm and Hand**—Carrie E. Chapman, M.D., Oakland.

10:40—**Prosthesis and Terminal Devices for Traumatic Injuries of Forearm and Hand**—Charles O. Bechtol, M.D., Los Angeles.

11:00—**Round Table Discussion.**

TWO GENERAL MEETINGS

MONDAY, FEBRUARY 23—2:00 p.m., Polk Hall, Civic Auditorium

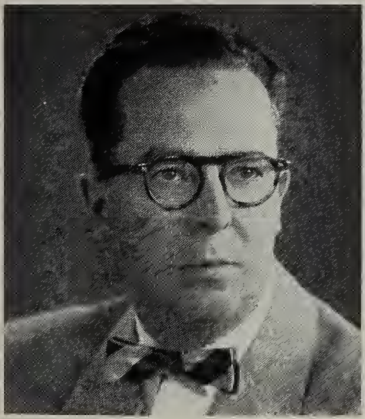
Diagnosis and Management of Upper Gastrointestinal Bleeding

TUESDAY, FEBRUARY 24—NOON, Main Entrance to Civic Auditorium

Vallecitos Atomic Laboratory Tour

OBSTETRICS AND GYNECOLOGY

Chairman.................. Keith P. Russell, M.D., Los Angeles
Secretary.............. Donald R. Nelson, M.D., San Francisco
Assistant Secretary........ John C. McDermott, M.D., Los Angeles



KEITH P. RUSSELL
Chairman

DONALD R. NELSON
Secretary

SUNDAY and MONDAY, FEBRUARY 22 and 23

University of California Medical Center
Second and Parnassus Avenues

Postgraduate Course in Endocrinology

Co-Sponsored by Section on Obstetrics and Gynecology

Sunday

9:00—Female Endocrinology.
2:00—Pediatric Endocrinology.

Monday

9:00—Adolescent and Adult Endocrinology.

For curriculum and registration information, see pages 14 and 15.

TUESDAY, FEBRUARY 24

Noon—Main Entrance, Civic Auditorium

Vallecitos Atomic Laboratory Tour

Fee $5.00—Tickets on sale at Registration Desk.
For program, see General Meetings.

WEDNESDAY, FEBRUARY 25

9:00—Room 405, Civic Auditorium

9:00—Ano-Rectal Complications During Pregnancy—Lewis Grodsky, M.D., San Francisco.

9:30—Interstitial Radioactive Gold Therapy of the Lateral Pelvic Lymph Nodes in Carcinoma of the Uterine Cervix—Captain W. S. Baker, Jr., MC, USN, San Diego, by invitation.

10:00—Experiences of an Rh Committee in a Private General Hospital—Bruce B. Rolf, M.D., Los Angeles.

10:30—Recess.

10:45—Synthetic Oxytocin—Lester T. Hibbard, M.D., Los Angeles.

11:15—Chairman's Address—Keith P. Russell, M.D., Los Angeles.

11:45—Business Meeting.

WEDNESDAY, FEBRUARY 25

2:00—Polk Hall, Civic Auditorium

Joint Meeting with Section on Pediatrics

Panel Discussion

Brain Damage in the Infant from the Viewpoint of the Obstetrician and Pediatrician

Moderator: Philip H. Arnot, M.D., San Francisco

2:00—Central Nervous System Damage in Infancy—Peter Cohen, M.D., San Francisco.

2:15—Pathology—Cyril B. Courville, M.D., Los Angeles.

2:30—Prenatal Causes of Neurological Disease in Infancy—Rex H. Whitworth, M.D., San Francisco.

2:45—Genetics—Curt Stern, Ph.D., Berkeley, by invitation.

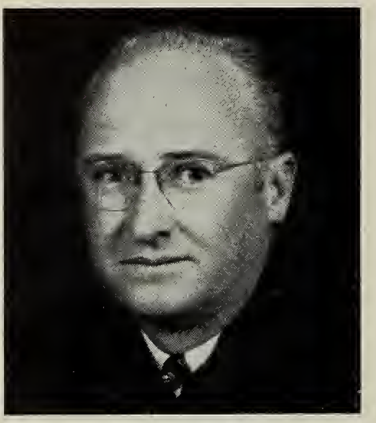
3:00—Summary—Philip H. Arnot, M.D., San Francisco.

3:15—Recess.

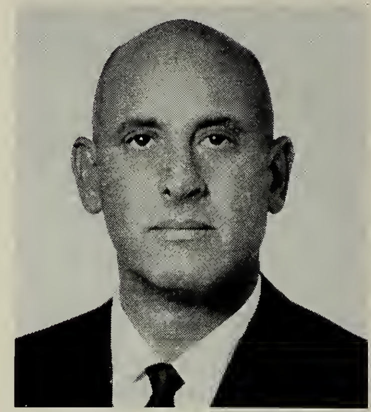
3:30—Round Table Discussion and Questions.

ORTHOPEDICS

Chairman.................Floyd Jergesen, M.D., San Francisco
Secretary............Howard A. Mendelsohn, M.D., Beverly Hills
Assistant Secretary............Carl E. Horn, M.D., Sacramento



FLOYD JERGESEN
Chairman



HOWARD A. MENDELSOHN
Secretary

SUNDAY, FEBRUARY 22

9:00—Room 405, Civic Auditorium

Joint Meeting with the Section on Pathology and Bacteriology

For program, see Section on Pathology and Bacteriology

12:00—English Room, Sheraton-Palace Hotel

12:00—**Luncheon.**

1:00—**Business Meeting and Election of Officers.**

SUNDAY, FEBRUARY 22

2:00—Room 405, Civic Auditorium

2:00—**Intensive Rehabilitation in a Chronic Disease Hospital**—John E. Affeldt, M.D., Vernon Nickel, M.D., and Jacquelin Perry, M.D., Downey; and Bertrand C. Kriete, M.D., Downey, by invitation.
Discussion.

2:20—**Laminectomy for Intervertebral Disc Derangement—A Clinical Survey**—Mark Stern, M.D., Los Angeles, by invitation; and Howard A. Mendelsohn, M.D., Beverly Hills.
Discussion.

2:40—**Improved Technique for Radiography in Hip Fractures**—Frederic W. Ilfeld, M.D., and Stephen Field, M.D., Beverly Hills.
Discussion.

3:00—**Intermission.**

3:20—**Osteotomy in the Treatment of Certain Highly Selected Fresh Fractures of the Femoral Neck**—William A. Teipner, M.D., San Francisco, Norman L. Portello, M.D., Pleasant Hill, and Edwin Schottstaedt, M.D., San Francisco.
Discussion.

3:40—**Closed vs. Open Treatment of Femoral Shaft Fractures—A Survey of 85 Cases**—Edgar E. Ramey, M.D., Los Angeles, by invitation.
Discussion.

4:00—**Chairman's Address**—Floyd H. Jergesen, M.D., San Francisco.

PRESIDENT'S DINNER DANCE

TUESDAY, FEBRUARY 24

Garden Court, Sheraton-Palace Hotel, 8:00 p.m.

Formal dress optional

Tickets will be on sale at the C.M.A. Information Desk at the Sheraton-Palace Hotel

PATHOLOGY AND BACTERIOLOGY

Chairman	Leslie R. Grams, M.D., San Jose
Secretary	Leo Kaplan, M.D., Los Angeles
Assistant Secretary	Robert L. Dennis, M.D., San Jose

LESLIE R. GRAMS
Chairman

LEO KAPLAN
Secretary

SUNDAY, FEBRUARY 22

9:00—Room 405, Civic Auditorium

Joint Meeting with the Section on Orthopedics

Co-Chairmen: Leslie R. Grams, M.D., San Jose, and Floyd H. Jergesen, M.D., San Francisco

9:00—**Malignant Bone Tumors in Siblings: A Case Report**—Robert W. Huntington, Jr., M.D., Bakersfield; and Donald L. Sheffel, M.D., Los Angeles, by invitation.

9:15—**Changes Occurring in Paget's Disease with Newer Hormonal Agents**—Felix O. Kolb, M.D., San Francisco.

9:35—**Unusual Chondroid Tumors of Bone—A Clinical and Pathologic Survey of 20 Cases**—Louis Lichtenstein, M.D., and Donald Bernstein, M.D., Los Angeles, both by invitation.

9:55—**The Formation, Structure and Function of Cartilage**—Carl E. Andersen, M.D., Santa Rosa.

10:15—**Giant Cell Fibroma and Its Relationship to Aneurysmal Bone Cyst**—J. Vernon Luck, M.D., and Weldon K. Bullock, M.D., Los Angeles.

10:35—**Intermission.**

10:45—**The Pathogenesis of Metabolic Bone Disease**—Jackson T. Crane, M.D., San Francisco.

11:05—**Prevention and Management of Staphylococcal Infections of Extremities**—Edwin J. Pulaski, Lt. Colonel, MC, USA, San Francisco, by invitation.

11:25—**Panel Discussion.**

11:45—**Recess.**

11:55—**Chairman's Address**—Leslie R. Grams, M.D., San Jose.

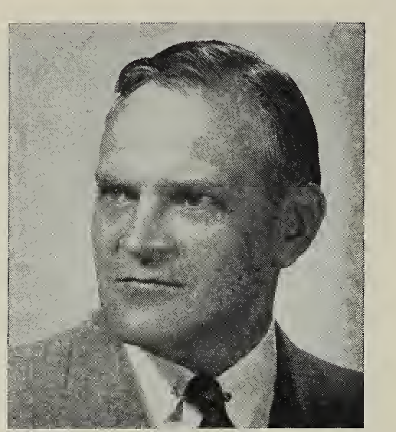
12:15—**Business Meeting and Election of Officers.**

REGISTRATION

Registration and information desks are located in the Main Arena, Civic Auditorium. *All members, guests, and visitors are requested to register immediately on arrival.* There is no charge for registration except for Postgraduate Courses. Registration desks are open 8:30 a.m. to 5:30 p.m. Sunday through Wednesday. *Admission to the general and section sessions and exhibit areas is by badge only.*

PEDIATRICS

Chairman.................Percy H. Jennings, Jr., M.D., Berkeley
Secretary.........Gordon L. Richardson, M.D., North Hollywood
Assistant Secretary.............James L. Dennis, M.D., Oakland



PERCY H. JENNINGS, JR.
Chairman

GORDON L. RICHARDSON
Secretary

SUNDAY and MONDAY, FEBRUARY 22 and 23

University of California Medical Center
Second and Parnassus Avenues

Postgraduate Course in Endocrinology

Co-Sponsored by Section on Pediatrics

Sunday

9:00—Female Endocrinology.
2:00—Pediatric Endocrinology.

Monday

9:00—Adolescent and Adult Endocrinology.

For curriculum and registration information, see pages 14 and 15.

WEDNESDAY, FEBRUARY 25

9:00—Polk Hall, Civic Auditorium

Symposium

Practical Pediatrics as Viewed by Various Specialties

9:00—Surgery—Edward M. Greaney, Jr., M.D., Los Angeles.
Discussion by Melvin Schwartz, M.D., Alameda.

9:25—Ear, Nose and Throat—Francis A. Sooy, M.D., San Francisco.
Discussion by H. E. Thelander, M.D., San Francisco.

9:50—Orthopedics—Theodore A. Lynn, M.D., Los Angeles.
Discussion by A. Crawford Bost, M.D., San Francisco.

10:15—Business Meeting and Election of Officers.

10:30—Recess.

10:45—Allergy—Albert H. Rowe, M.D., Oakland.
Discussion by Otis Cobb, M.D., Concord.

11:10—Ophthalmology—Warren A. Wilson, M.D., Los Angeles.
Discussion by Wendell R. Coffelt, M.D., Burbank.

11:35—Wellness Care for Children—Percy H. Jennings, Jr., M.D., Berkeley.
Discussion by Frank W. Norman, M.D., Santa Rosa.

WEDNESDAY, FEBRUARY 25

2:00—Polk Hall, Civic Auditorium

Joint Meeting with the Section on Obstetrics and Gynecology

Panel Discussion

Brain Damage in the Infant from the Viewpoint of the Obstetrician and Pediatrician

Moderator: Philip H. Arnot, M.D., San Francisco

2:00—Central Nervous System Damage in Infancy—Peter Cohen, M.D., San Francisco.

2:15—Pathology—Cyril B. Courville, M.D., Los Angeles.

2:30—Prenatal Causes of Neurological Disease in Infancy—Rex H. Whitworth, M.D., San Francisco.

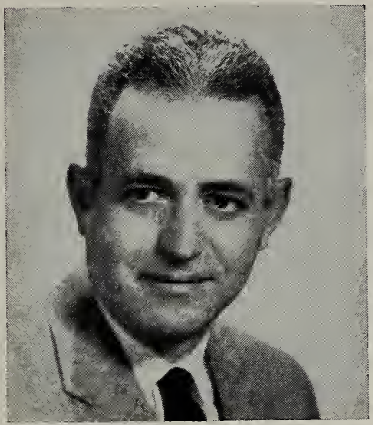
2:45—Genetics—Curt Stern, Ph.D., Berkeley, by invitation.

3:00—Summary—Philip H. Arnot, M.D., San Francisco.

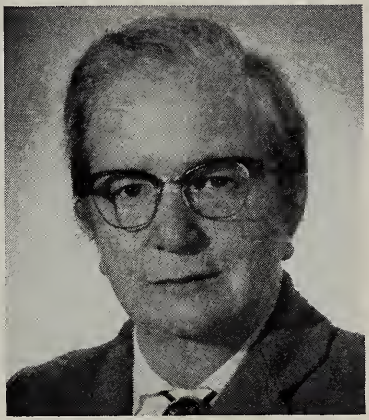
3:30—Round Table Discussion and Questions.

PHYSICAL MEDICINE

Chairman....................David Rubin, M.D., Los Angeles
Secretary..................Carrie E. Chapman, M.D., Oakland
Assistant Secretary......Joseph E. Maschmeyer, M.D., Los Angeles



DAVID RUBIN
Chairman



CARRIE E. CHAPMAN
Secretary

SUNDAY, FEBRUARY 22

Noon—Room 2064, Sheraton-Palace Hotel

Chairman: David Rubin, M.D., Los Angeles

12:00—**Luncheon and Business Meeting.**

1. **Physical Medicine in a Community**—Arthur C. Jones, M.D., Portland, Oregon, by invitation.
2. **Recent Advances in Neuromuscular Physiology**—H. J. Ralston, Ph.D., San Francisco, by invitation.
3. **Skin Disorders of the Amputee**—S. William Levy, M.D., San Francisco.

MONDAY, FEBRUARY 23

9:00—Room 404, Civic Auditorium

Joint Meeting with the Section on Industrial Medicine and Surgery

Chairman: Leonard J. Yamshon, M.D., Los Angeles

Panel Discussion

Traumatic Injuries to the Forearm and Hand

Moderator: David Rubin, M.D., Los Angeles

9:00—**Anatomy of the Forearm and Hand**—David L. Bassett, M.D., Palo Alto.

9:20—**Fractures of the Forearm and Hand and Treatment**—E. R. Schottstaedt, M.D., San Francisco.

9:40—**Soft Tissue Injuries of the Forearm and Hand and Treatment**—Donald R. Pratt, M.D., San Francisco.

10:00—**Anesthesia Treatment Techniques for Injuries of the Forearm and Hand**—Charles D. Anderson, M.D., Oakland.

10:20—**Physical Medicine Treatment Techniques for Injuries of the Forearm and Hand**—Carrie E. Chapman, M.D., Oakland.

10:40—**Prosthesis and Terminal Devices for Traumatic Injuries of Forearm and Hand**—Charles O. Bechtol, M.D., Los Angeles.

11:00—**Round Table Discussion.**

TUESDAY, FEBRUARY 24

Noon—Main Entrance, Civic Auditorium

Vallecitos Atomic Laboratory Tour

Fee $5.00—Tickets on sale at Registration Desk.

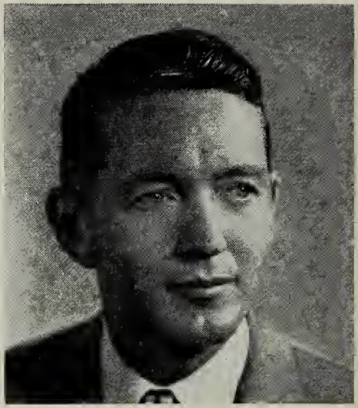
For program, see General Meetings.

BRING PROPER IDENTIFICATION FOR REGISTRATION

PSYCHIATRY AND NEUROLOGY

Chairman....................Elinor R. Ives, M.D., Los Angeles
Secretary..................John D. Moriarty, M.D., Hollywood
Assistant Secretary.........Leon J. Whitsell, M.D., San Francisco

ELINOR R. IVES
Chairman



JOHN D. MORIARTY
Secretary

TUESDAY, FEBRUARY 24

9:00—Room 402, Civic Auditorium

Neurology

9:00—**Chairman's Address**—Elinor R. Ives, M.D., Los Angeles.

9:15—**Some Biochemical Changes in Multiple Sclerosis and the Influence of Digestive Enzymes**—Clinton H. Thienes, M.D., Pasadena; and Ralph G. Skillen, D.V.M., Ruben Gomez, M.D., Sharad S. Deshpande, M.S., Ruth McCandless, A.B., and Dorothy Fish, Pasadena, all by invitation.

9:30—**Allergic Encephalomyelitis as an Experimental Model for Multiple Sclerosis**—Elizabeth Roboz, Ph.D., Stanford, by invitation.

Discussion by Sidney Raffel, M.D., Stanford and Knox H. Finley, M.D., San Francisco.

9:45—**The Biochemical and Physiological Significance of Gamma-Aminobutyric Acid**—Eugene Roberts, Ph.D., Duarte, by invitation.

Discussion by Elizabeth Roboz, Ph.D., Stanford.

10:00—**Mechanism of Headache and Dizziness in the Cervical and Post Concussion Syndromes**—Frank W. Bailey, M.D., Fresno.

Discussion by Cyril B. Courville, M.D., Los Angeles and Edmund J. Morrissey, M.D., San Francisco.

10:15—**Paraphyseal (Colloid) Cysts of the Third Ventricle—Review of Ten Cases with Special Attention to Diagnostic Features**—Robert C. Heaven, M.D., Los Angeles; and Ethyl F. Young, M.D., Los Angeles, by invitation.

Discussion by Cyril B. Courville, M.D., Los Angeles and John W. Hanbery, M.D., San Francisco.

10:30—**A Reevaluation of Lumbar Puncture in the Presence of Papilledema and Intracranial Hypertension—A Study of 129 Cases**—Julius Korein, Captain (MC) USAF, Travis Air Force Base; Humberto Cravioto, M.D., New York City, and Mario Leicach, M.D., New York City, all by invitation.

Discussion by Glen O. Cross, M.D., San Francisco.

10:45—**The Early Prognosis of Patients with Cervical Cord Injury**—Sedgwick Mead, M.D., Vallejo.

Discussion by Frederick A. Fender, M.D., San Francisco.

11:00—**Experiences in Anterior Fusion and Disc Removal for Cervical Spondylosis**—Robert W. Rand, M.D., Los Angeles; and Paul H. Crandall, M.D., Los Angeles.

Discussion by Edwin B. Boldrey, M.D., San Francisco.

11:15—**Sciatic Stretching in the Treatment of Postoperative Pain Following Removal of Ruptured Lumbar Intervertebral Disc**—John E. Adams, M.D., and Verne Inman, M.D., San Francisco.

Discussion by Frank Raney, Jr., M.D., San Francisco.

11:30—**Neurological Complications of Pregnancy and Puerperium**—Kenneth H. Abbott, M.D., Los Angeles; and James E. Barnes, M.D., Ohio, by invitation.

Discussion by Donald Macrae, M.D., San Francisco.

11:45—**Evaluation of Children with Organic Defects of the Nervous System**—Lawrence H. Arnstein, M.D., and Daniel W. Meub, M.D., Palo Alto.

Discussion by Robert E. Cook, M.D., San Francisco.

WEDNESDAY, FEBRUARY 25

9:00—Room 403, Civic Auditorium

Psychiatry

9:00—Business Meeting.

9:15—**Clinical Experience with a New Phenothiazine Tranquilizer (Mellaril®)**—Leo E. Hollister, M.D., Palo Alto; and Benjamin F. Macdonald, M.D., Palo Alto, by invitation.

Discussants: Charles Freed, M.D., San Francisco and Lester Margolis, M.D., San Mateo.

9:35—**Chemotherapeutic Management of the Acute Phase of Narcotic Addiction: Preliminary Report**—Stuart C. Knox, M.D., Los Angeles.

Discussant: Alfred Auerback, M.D., San Francisco.

10:00—**Culture and Mental Disease—With Special Reference to Thailand**—Karl M. Bowman, M.D., San Francisco.

Discussion.

10:30—**Castrated Pseudohermaphrodite Transvestite**—Robert J. Stoller, M.D., Los Angeles.

Discussant: Karl M. Bowman, M.D., San Francisco.

10:50—**Senior Medical Students Study Patients With the Clinical Team**—Henry F. Albronda, M.D.; Robert L. Dean, M.A., by invitation; John A. Starkweather, Ph.D., by invitation; and Stanislaus A. Szurek, M.D., all from San Francisco.

11:15—**A Study of Psychotherapeutic Outcome: Some Characteristics of Successfully and Unsuccessfully Treated Patients**—Hugh A. Storrow, M.D., by invitation; and Norman Q. Brill, M.D., Los Angeles.

11:40—**The Psychodynamics of Consummated Maternal Incest: Report of Two Cases**—C. W. Wahl, M.D., Los Angeles, by invitation.

Discussant: Ernest G. Lion, M.D., San Francisco.

QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION

(a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association or A.M.A. membership card.)

(b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. (A membership card of the Student American Medical Association or letter from their dean's office.)

(c) Medical secretaries will be admitted upon presentation of a letter from the physician employer.

(d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer.

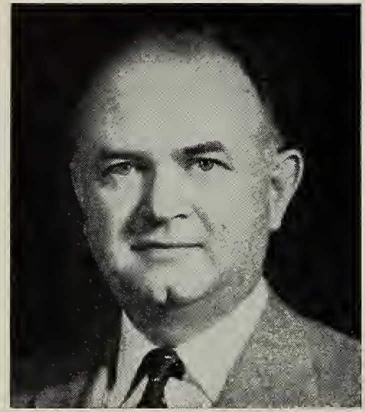
(e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), student nurses, x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification.

(f) *All questions on admission will be passed upon by a member of the Committee on Registration who will be present at the desk.*

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

PUBLIC HEALTH

Chairman	Gerald A. Heidbreder, M.D., Los Angeles
Secretary	Carolyn B. Albrecht, M.D., San Rafael
Assistant Secretary	Merle E. Cosand, M.D., San Bernardino



GERALD A. HEIDBREDER
Chairman

CAROLYN B. ALBRECHT
Secretary

WEDNESDAY, FEBRUARY 25

2:00—Room 403, Civic Auditorium

2:00—**Rabies Prophylaxis—Problems in Management of Animal Bites**—Arthur C. Hollister, Jr., M.D., Berkeley, and Ben H. Dean, D.V.M., Berkeley, by invitation.

Discussion.

2:30—**Tetanus in California—Problems in Prevention and Control**—Philip K. Condit, M.D., Berkeley.

Discussion: Albert G. Bower, M.D., Pasadena, and Donald E. Ross, M.D., Los Angeles.

3:15—**Facts and Fallacies About Gonorrhea and Syphilis**—Warfield Garson, M.D., Chapel Hill, North Carolina, by invitation.

Discussion.

3:40—**Recess.**

3:50—**Radiation Facts for Public Health Officers**—Reynold F. Brown, M.D., San Francisco.

Discussion.

4:15—**Epidemiology in Social Science**—Harold D. Chope, M.D., San Mateo.

Discussion.

4:40—**Business Meeting.**

EMERGENCY CALLS AND MESSAGES

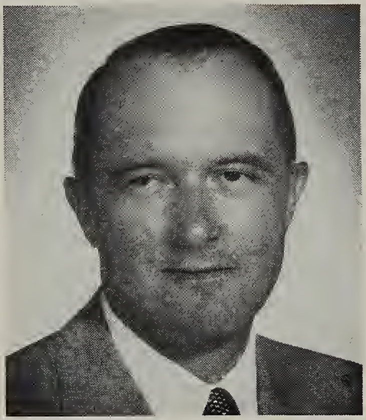
Each physician should notify his own secretary regarding the *exact* section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will *attempt* to transmit messages to the individual physician.

In case of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the local County Medical Societies.

RADIOLOGY

Chairman . . . . Nathan M. Spishakoff, M.D., Los Angeles
Secretary . . . . William H. Graham, M.D., San Jose
Assistant Secretary . . . . Frank C. Binkley, M.D., Pasadena

NATHAN M. SPISHAKOFF
Chairman



WILLIAM H. GRAHAM
Secretary

SUNDAY, FEBRUARY 22

9:00—Room 403, Civic Auditorium

Diagnostic Radiology

9:00—**Respiratory Distress of the Newborn, Roentgen Findings**—David E. Zion, M.D., Los Angeles, and Robert A. Ledner, M.D., Los Angeles, by invitation.
Discussion.

9:25—**Technical Factors in the X-Ray Examination of the Small Intestine**—Ross Golden, M.D., Los Angeles.
Discussion.

9:50—**Recess.**

10:00—**Pseudosubluxation of the Axis in Children**—H. Harlan Bleecker, M.D., and George Jacobson, M.D., Los Angeles.
Discussion.

10:25—**Anatomical and Radiological Studies of the Excised Spine**—Donald L. McRae, M.D., Montreal, by invitation.
Discussion.

11:10—**Cineradiographic Evaluation of the Cervical Spine**—Malcolm D. Jones, M.D., San Francisco.
Discussion.

11:35—**Radiologic Diagnosis of Posterior Fossa Tumors**—Samuel B. Haveson, M.D., San Francisco, by invitation.
Discussion.

11:55—**Business Meeting and Election of Officers.**

SUNDAY, FEBRUARY 22

2:00—Room 403, Civic Auditorium

Therapeutic Radiology

2:00—**Intracranial Meningeal Fibroblastomata** — Donald L. McRae, M.D., Montreal, by invitation.
Discussion.

2:50—**Experience with Cancer of the Lung in Females**—Richard E. Ottoman, M.D., and Justin J. Stein, M.D., Los Angeles.
Discussion.

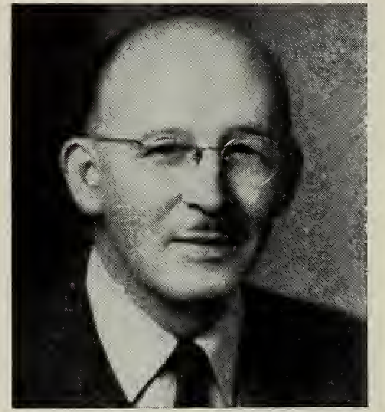
3:10—**Palliation of Pelvic Pain for Recurrent Cancer Involving the Pelvis with Combined Radiation and Chemotherapy**—Sydney F. Thomas, M.D., G. Melvin Stevens, M.D., and Blake C. Wilbur, M.D., Palo Alto.
Discussion.

3:30—**Recess—Annual Meeting of Pacific Roentgen Society.**

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

UROLOGY

Chairman	Ray C. Atkinson, M.D., Oakland
Secretary	Earl F. Nation, M.D., Pasadena
Assistant Secretary	Morrell E. Vecki, M.D., San Francisco



RAY C. ATKINSON
Chairman

EARL F. NATION
Secretary

WEDNESDAY, FEBRUARY 25

9:00—Room 404, Civic Auditorium

9:00—**Pheochromocytoma, A Report of Ten Cases**—Frank Hill, M.D., San Francisco, by invitation, and Donald R. Smith, M.D., San Francisco.

Discussion by James M. Whisenand, M.D., La Jolla.

9:20—**Renal Hypertension Resulting from Aneurysm of the Renal Artery**—Charles Pierre Mathé, M.D., San Francisco.

Discussion by John W. Dorsey, M.D., Long Beach.

9:40—**Application of the Papanicolaou Technique to Follow-up Care of Tumors of the Urinary Bladder**—Joseph Presti, M.D., and Henry M. Weyrauch, M.D., San Francisco.

Discussion by Michael J. Feeney, M.D., San Diego.

10:00—**Etiology and Pathogenesis of Human Intersexuality**—Frederick S. Howard, M.D., San Francisco.

Discussion by William Wallace Scott, M.D., Baltimore, Maryland, by invitation.

10:20—**Recess.**

10:30— **Panel Discussion**

Work-Up in Childhood Urinary Tract Infection

Moderator: Donald R. Smith, M.D., San Francisco

Members of the Panel: William Wallace Scott, M.D., Baltimore, by invitation; Henry M. Weyrauch, M.D., John A. Hutch, M.D., and Bradford W. Young, M.D., San Francisco; Richards P. Lyon, M.D., Berkeley.

WEDNESDAY, FEBRUARY 25

2:00—Room 404, Civic Auditorium

2:00—**Management of Early Prostatic Carcinoma**—Roger W. Barnes, M.D., and, by invitation, Delmont Emery, M.D., Los Angeles.

Discussion by Frank Hinman, M.D., San Francisco, and Roderick D. Turner, M.D., Los Angeles.

2:30—**Prostatectomy, A Survey of Two Thousand Cases**—Philip M. Beglin, M.D., San Francisco, and C. Bruce Thrasher, M.D., San Francisco, by invitation.

Discussion by Samuel Peck, M.D., San Diego.

3:00—**Prostatic Cancer**—William Wallace Scott, M.D., Baltimore, by invitation.

4:00—**Chairman's Address**—Ray C. Atkinson, M.D., Oakland.

4:15—**Business Meeting and Election of Officers.**

BRING PROPER IDENTIFICATION FOR REGISTRATION

Motion Picture Program

February 22-25

Because of the ever increasing popularity of motion pictures in the field of medical teaching, the California Medical Association, this year, through the efforts of the Motion Picture Division of the Postgraduate Activities Committee, has instituted a new format. Each session will comprise subjects of one specialty and, where possible, will be a symposium of certain phases of that specialty. This year there will be a moderator and several outstanding specialists as discussants. The viewers will have an opportunity to ask questions and get authoritative answers.

The evening programs have been arranged for the enjoyment of the doctor, as well as for his wife, family, nurses, technicians and ancillary groups, with film subjects of scientific and general appeal.

Daytime programs—Larkin Hall, Civic Auditorium

Evening programs—Comstock Room, Sheraton-Palace Hotel

PAUL D. FOSTER, M.D., *Chairman*, Motion Picture Division, Committee on Postgraduate Activities, Presiding

SUNDAY, FEBRUARY 22

9:00 a.m.—Larkin Hall, Civic Auditorium

Film Symposium on Proctology

Panel:

Moderator: Russell R. Klein, M.D.

Authors: Malcolm R. Hill, M.D.; David Miller, M.D.

9:00—**Anorectal and Sigmoidoscopic Examination with Differential Diagnosis**—Malcolm R. Hill, Los Angeles.

This film stresses the value of routine anorectal and sigmoidoscopic examination. The technique is well outlined and demonstrated by animation. Disease entities are demonstrated; double contrast barium enema study is well illustrated. The physician's responsibility and legal medicine are emphasized. Sound, color, 30 minutes.

9:40—**Hemorrhoids and the Early Detection of Rectal Cancer**—A. Lawrence Abel and H. Gordon Ungley, London.

This film is an introduction to the subject showing anatomy of the anorectal area and depicting the routine examination by digital and proctoscopic examination, minor surgery and terminating with x-ray of the pelvis. Sound, 24 minutes.

10:14—**Techniques of Proctoscopy**—Raymond J. Jackman and Edward R. Morgan, Mayo Clinic, Rochester, Minnesota.

Demonstrates on a sagittal section of the pelvis, as well as endoscopic photographs on a live model, the technique of passing the proctoscope. Sound, color, 17 minutes.

10:41—**"Melena"**—David Miller, College of Medical Evangelists, Los Angeles.

Method of passage of sigmoidoscope in cadaver and in live patient. Various shades of blood in rectum and lower sigmoid, their meaning, x-ray views of lesions causing bleeding. Silent, with discussion by author, 21 minutes.

11:12—**The Thiersch Wiring for Massive Rectal Prolapse**—Robert Turell, New York.

This film shows the technique of the Thiersch Operation as modified by Dodd. The operative procedure is illustrated first diagrammatically by means of black and white illustrations, then by color photography of the actual operation. Silent, 15 minutes.

SUNDAY, FEBRUARY 22

2:00 p.m.—Larkin Hall, Civic Auditorium

Film Symposium on Obstetrics and Gynecology

Panel:

Moderator: C. Frederic Fluhmann, M. D.

Specialists: Robert S. Pollack, M.D.; Albert E. Long, M.D.; Edmund Anderson, M.D.; H. W. Seiger, M.D.

2:00—**The Complete Office Gynecological Examination**—Frederick Hofmeister, Milwaukee.

Demonstrates what constitutes a complete gynecological examination, which includes Papanicolaou smear, endometrial biopsy, examination of the breasts, rectal-vaginal-abdominal examination and cervical biopsy. Sound, color, 17 minutes.

2:27—**Safe and Conservative Treatment of Lesions of the Female Breast**—W. Emory Burnett, Philadelphia.

The safe substitution of aspiration for biopsy in fibrocystic mastitis is shown as is the ease and simplicity of this maneuver, and the adequate exposure of the transverse (Stewart) incision for radical mastectomy. Sound, 32 minutes.

3:09—**Cystectomy for Ovarian Dermoids — Technique of Victor Bonney**—Phil C. Schreier and Albert M. Alexander, Memphis, Tenn.

Presents actual operations salvaging the outer capsule of the ovarian cyst. Diagnosis of the dermoid cyst; reconstruction of the ovary is demonstrated. Sound, 25 minutes.

3:44—**Vaginal Repair of Urethro-Vaginal Fistula**—James W. Merricks, Burnell V. Reaney, Clarence C. Close and Frank B. Papierniak, Highland Park, Illinois.

Discusses etiology and frequency of urethro-vaginal fistulas, surgical repair, illustrated by descriptive drawings. Sound, 22 minutes.

4:11—**Low Cervical Cesarean Section**—Robert B. Wilson, Rochester, Minn.

This film illustrates the technique for local anesthesia for the performance of the operation. A cesarean section is then performed—special features. Sound, 20 minutes.

4:36—**Cold Coning of the Uterine Cervix**—H. Wright Seiger, Santa Monica.

Cold coning of the uterine cervix with the Seiger Coning Knife is shown in two operations. Also shown is the Coagsuc, a suction tube with a coagulating tip. Sound, color, 20 minutes.

SUNDAY, FEBRUARY 22

8:00 p.m.—Comstock Room, Sheraton-Palace Hotel

For Nurses, Technicians, Ancillary Medical Personnel, Physicians and Their Wives

8:00—**The Miracle of Reproduction**—Sid Davis Productions.

This film shows the similarities in the growth and development of fish, chickens, cows, and human beings. It includes a sequence showing the growth of the human baby within the mother's body and the birth of the child. Sound, 15 minutes.

8:15—**The Antibiotics and Terramycin.**

Reviews the role of various antibiotics in counteracting pathogens. Discusses side effects, indications, criteria of usefulness, resistance and these factors as they apply to Terramycin. Sound, color, 22 minutes.

8:37—**High Blood Pressure**—American Heart Association.

Explains blood pressure and the conditions underlying hypertension. Sketches treatment that a physician may prescribe. Animation. Sound, color, 7 minutes.

8:44—**Strokes**—American Heart Association.

Discusses physiology and conditions underlying strokes, effects and possibilities of recovery. Animation. Sound, color, 6 minutes.

8:50—**Varicose Veins**—American Heart Association.

Describes largely in animation, the causes and and treatment of Varicose Veins. Sound, color, 7 minutes.

8:57—**Intermission.**

9:07—**The Heart Crippler**—A University of Kansas Television Production. Produced by David S. Ruhe, M.D., and Bruce A. Linton, Ph.D., with the collaboration of the Children's Convalescent Center for Rheumatic Fever, the Kansas City-West Central Missouri Heart Association.

The film describes the symptoms and course of rheumatic fever, the diagnostic and therapeutic treatment procedures used and the medical and social problems attendant to it. Sound, 28 minutes.

9:35—**The Mantle of Protection**—Filmed at Irvington House, Irvington-on-Hudson, New York, under the technical supervision of Gene H. Stollerman, M.D., then Medical Director, Irvington House.

Aims to heighten awareness of the importance of the early diagnosis, treatment, and prevention of rheumatic fever. Sound, 29 minutes.

MONDAY, FEBRUARY 23

9:00 a.m.—Larkin Hall, Civic Auditorium

Film Symposium on Hypertension

Panel:

Moderator: Daniel Gorman, M.D.

Specialists: Norman Sweet, M.D.: Joseph Kaufman, M.D.; Robert Crede, M.D.

9:00—**Vascular Headache**—Henry D. Ogden, New Orleans.

Reports findings of a survey of 4634 persons. Some of the topics covered are: frequency, incidence, pathological physiology, associated symptoms and typical vascular disturbances, trigger and predisposing causes, sensitization causes, and drugs used in treatment. Sound, 14 minutes.

9:24—**The Jugular Venous Pulse**—Paul Wood, London.

The object of this film is to stress the wealth of clinical information that is obtained by observing carefully the wave form of the venous pulse, and its practical bedside application. Sound, 21 minutes.

9:55—**Portal Hypertension** — Telfer B. Reynolds, A. G. Redeker, A. C. Pattison, W. Mikkelson, U.S.C. School of Medicine.

Demonstrates the medical techniques used in the diagnosis and evaluation of portal hypertension, the surgical approach to the problem and the results of surgical prescription. Sound, kinescope, 60 minutes.

11:05—**Edema and Mercurial Diuresis**—Arthur C. DeGraff, Herbert S. Kupperman, Robert A. Lehman, Alfred Vogl.

This film presents the mechanisms of edema, their relationship to congestive heart failure, and the therapeutic role of the mercurial diuretics in controlling the process. Sound, color, 12 minutes.

MONDAY, FEBRUARY 23

7:30 p.m.—Comstock Room, Sheraton-Palace Hotel

For Nurses, Technicians, Ancillary Medical Personnel, Physicians and Their Wives

7:30—**Anterior Disk Removal and Spinal Fusion in Cervical Disk Disease**—Robert W. Rand and Paul H. Crandall, Los Angeles.

This film illustrates the operative technique in removing diseased intervertebral cervical disks by an anterior approach rather than the standard laminectomy. With this method, the transverse hypertrophic ridges and interforaminal osteophytes can be removed safely. The operation is concluded by a dowel type of interbody spinal fusion. Fluorocinematographic studies of cervical vertebrae before and after surgery will be demonstrated. Color, 20 minutes.

7:50—**The Man Who Didn't Walk**—Produced by the American Medical Association and the American Bar Association.

This film is on the subject of traumatic neurosis. Color, sound, 30 minutes.

8:20—**After Mastectomy**—American Cancer Society, Oregon Division.

Presents problems of helping patients to readjust emotionally and physically after mastectomy. Sound, color, 19 minutes.

8:39—**Immediate Postoperative Care**—Frank Glenn, John M. Beal and Joseph Artusio, Jr., New York.

This film shows a wide variety of procedures, equipment, drugs, and special skills required to provide patients with the same caliber of care during the immediate postoperative period that they received during the operation. Sound, color, 27 minutes.

9:06—**Intermission.**

9:16—**Home Care for Respirator Patients**—John E. Affeldt, Enid Callahan and Donovan J. Perkins, Rancho Los Amigos Hospital.

The film presents a program for return home of the severely involved poliomyelitic patient using respirator aids. It shows the basic requirements of preplanning, home investigation, and post-discharge follow-up. Sound, 14 minutes.

9:30—**Horizons of Hope**—Sloan-Kettering Institute.

A live-action animation film showing the intense research program being conducted by the Sloan-Kettering Institute to find a cure for cancer. Sound, color, 18 minutes.

9:48—**Someone is Watching (Careless Handling of Narcotics)**—New York State Department of Health.

The purpose of this film is to call attention to the various ways in which legal narcotics through carelessness fall into the hands of dope addicts and peddlers. Sound, 14 minutes.

TUESDAY, FEBRUARY 24

9:00 a.m.—Larkin Hall, Civic Auditorium

Film Symposium on Emergencies in Medicine

Moderator: Francis E. West, M.D.

Specialist: Burt Halter, M.D.

9:00—**Emergency Surgery for the Acutely Injured**—James D. Hardy, Jackson, Mississippi.

The purpose of this film is to emphasize considerations in the management of head, thoracic, abdominal and extremity injuries. It demonstrates the neurologic survey, exploratory thoracotomy, examination of urine and feces in possible urinary or colon wounds, and suture of a femoral artery. Sound, 34 minutes.

9:39—**Wounds of the Extremities—Debridement, Part II**—Department of the Army.

Describes techniques used in effective debridement of soft tissue wounds. Demonstrates the techniques used in cleaning wounds, and removing devitalized tissue and other foci of infection. Sound, 33 minutes.

10:17—**Early Management of the Severely Burned Patient**—Edwin H. Ellison and Roger D. Williams, Columbus, Ohio.

Presents, in sequence, the important steps in managing the severely burned patient. Discusses prevention of infection, and the treatment of shock. Interim care to the time of the first grafting is given. Sound, 30 minutes.

10:52—**Principles of Artificial Respiration**—James C. Whittenberger, Benjamin G. Ferris, Jr., Jere Mead, Boston.

Illustrates the basic physiological principles necessary to evaluate various types of manual and mechanical artificial respiration. Sound, 29 minutes.

11:26—**Resuscitation for Cardiac Arrest**—Claude S. Beck, Cleveland.

This film was planned to stimulate adequate instruction of personnel in all hospitals where major surgery is done to be prepared to take care of the problem of cardiac arrest as soon as it occurs. Sound, color, 18 minutes.

TUESDAY, FEBRUARY 24

2:00 p.m.—Larkin Hall, Civic Auditorium

Film Symposium on Dermatology

Panel:

Moderator: Rees B. Rees, Jr., M. D.

Specialists: John Epstein, M.D.; Arthur E. Smith, M.D., D.D.S.; Justin Stein, M.D.

2:00—**Dermatologic Office Procedures for the General Practitioner**—Gerald M. Frumess, Egbert I. Henschel, Henry M. Lewis, Denver.

Dermatological procedures that the physician may safely use in his office practice are shown including electrosurgical and surgical removal of benign skin tumors, methods of biopsy, the use of solid carbon dioxide, patch testing, application of Unna's paste boot, and similar procedures. Sound, color, 30 minutes.

2:40—**Moles and Melanoma**—Bureau of Medicine and Surgery, U. S. Navy.

The structure and skin cells of benign and cancerous moles are illustrated by animation. Shows the ineffective results with improper removal of a mole and the procedures that insure good results. Sound, color, 8 minutes.

2:58—**Oral Cancer: The Problem of Early Diagnosis**—American Cancer Society and National Cancer Institute.

Clinical material illustrates early lesions of the tongue, floor of the mouth, gingiva, cheek, palate, and lip. The technique of biopsy and the method of thorough oral examination are illustrated. Sound, color, 32 minutes.

3:40—**Correction of Advanced Rhinophyma by Means of Plastic Reconstructive Surgery—A New Technique**—Arthur E. Smith, Los Angeles.

The film depicts the detailed surgical technique, utilizing a full-thickness skin graft, surgical mechanics and applied sculpturing, in a patient with advanced rhinophyma. It also includes the preoperative conditions and postoperative results of five similar cases. Silent film, color, 40 minutes.

4:30—**Studies on Urine Porphyrin Excretion with Clinical Illustrations of Porphyria Cutanea Tarda**—R. E. Sterling, A. G. Redeker, Los Angeles.

A discussion of porphyrin biochemistry is presented. A brief discussion of porphyrin laboratory methods is made. An interesting case of acute porphyria with laboratory and genetic studies is presented. Sound, 23 minutes.

TUESDAY, FEBRUARY 24

8:00 p.m.—Comstock Room, Sheraton-Palace Hotel

For Nurses, Technicians, Ancillary Medical Personnel, Physicians and Their Wives

8:00—**Human Cell and the Cytotechnologist.**

A science film about the human cell, and the new scientific career opened up by the increasing use of cell study as a means of cancer detection. 22 minutes.

8:22—**Circulation of the Blood**—American Heart Association.

Describes by animation the anatomy of the heart, pulmonary and systemic circulatory systems, and the function of the capillaries. 7 minutes.

8:29—**Congenital Heart Defects**—American Heart Association.

An animated film describing the more common congenital defects and what the medical profession is now able to do for them. 7 minutes.

8:36—**Breath of Life**—John Sutherland Productions, Los Angeles.

Shows the use of oxygen in hospitals for therapeutic purposes. Done in cartoon animation. Sound, color, 13 minutes.

8:49—**Human Gastric Function**—Stewart Wolf, Oklahoma City, Oklahoma.

Reports on a unique patient with extensive gastric fistula. Insight was gained into the stomach's complex responses to different psychological states and stresses. Sound, 19 minutes.

9:08—**Intermission.**

9:18—**Out of Darkness.**

This film probes deeply into the world of mental patients and mental hospitals. Medical narration by Dr. William C. Menninger and dramatic reading by Orson Welles. Sound, 60 minutes.

WEDNESDAY, FEBRUARY 25

9:00 a.m.—Larkin Hall, Civic Auditorium

Film Symposium on Cardio-Vascular Diagnosis and Cardiac Surgery

Panel:

Moderator: Robert Gentry, M.D.

Authors: George C. Griffith, M.D.; Frank Gerbode, M.D., John F. Higginson, M.D.; Charles A. Kruse, M.D.; Jerome Harold Kay, M.D.

9:00—**Procedures in the Diagnosis of Cardiovascular Diseases**—George C. Griffith.

Discussion of rheumatic fever cases, diagnosis and management of a case of rheumatic mitral stenosis, pointing out auscultatory, electrocardiographic, phonocardiographic, vectorcardiographic, ballistocardiographic and fluoroscopic findings. Cardiac catheterization is demonstrated. The story structure is designed to develop interest in the subject of cardiography. Sound, color, 32 minutes.

9:41—**Median Sternotomy and Elective Arrest for Open Cardiac Surgery**—Frank Gerbode, Stanford Hospital, San Francisco.

A series of introcardiac malformations will be shown as exposed through a median sternotomy. In a number the heart is put into elective arrest with potassium citrate while the defect is repaired. Details of technique will be shown. Color, 26 minutes.

10:16—**Complete Correction of the Tetralogy of Fallot**—Jerome Harold Kay, Los Angeles.

Shows the correction of tetralogy of Fallot which includes closing the ventricular septal defect, correction of the overriding of the aorta and removal of the infundibular stenosis. Sound, color, 21 minutes.

10:30—**Pericardiectomy for Chronic Constructive Pericarditis**—John F. Higginson, Santa Barbara.

This film demonstrates pericardiectomy in a typical advanced case of chronic constrictive (calcified) pericarditis via a sternal splitting approach and shows the need for total pericardiectomy except for a very small remnant left on the posterior aspect of the heart. Color, 13 minutes.

10:52—**The Surgical Treatment of Arteriosclerotic Occlusive Disease**—Charles A. Kruse, Santa Monica, California.

This is a film showing the technique of thromboendarterectomy of the distal aorta and iliac arteries for arteriosclerotic occlusive disease (Leriche syndrome). The indications and results with the use of thromboendarterectomy in selected cases. Sound, color, 18 minutes.

11:19—**Disorders of the Heartbeat**—American Heart Association.

This film deals with the mechanism, diagnosis and clinical significance of the more common arrhythmias: premature beats, paroxysmal tachycardia, fibrillation, flutter and heart block. Animations, sound, color, 20 minutes.

WEDNESDAY, FEBRUARY 25

2:00 p.m.—Larkin Hall, Civic Auditorium

Film Symposium on General Surgery

Panel:

Moderator: Edwin G. Clausen, M.D.

Specialists: Wiley Barker, M.D.; Robertson Ward, M.D.; Carlton Matthewson, M.D., Robert Rand, M.D.

2:00—**The Surgical Management of Calcific Pancreatitis**—Robert J. Coffey, Georgetown University, Washington, D. C., and John A. Bollinger, Reseda, California.

The concept that in Calcific Pancreatitis, the calcareous material is intra-ductal is presented. The surgical procedures are included, with roentgenological demonstration, pathologic specimens, and pre- and postoperative radioactive blood lipid studies. Sound, color, 23 minutes.

2:33—**Surgical Repair of Ileovesical and Ileosigmoid Fistula Due to Terminal Ileitis**—Wiley F. Barker, Willard E. Goodwin, Chester Winter, all of UCLA Medical Center, Los Angeles.

An ileovesical fistula due to terminal ileitis is approached by the transvesical route. The advantage of this exposure is demonstrated, inflammatory mass is mobilized and the ileosigmoidal connection identified without harm to the sigmoid. Color, 18 minutes.

3:01—**Cholecystectomy and Operative Cholangiography**—Joel W. Baker and John H. Walker, Seattle, Wash.

Ilustrates the radiographic and operative techniques required for operative cholangiography, cholecystectomy and choledochostomy. The methods of intubating the common duct and teamwork involved in the actual taking and interpretation of radiographs is shown. Sound, 36 minutes.

3:47—**Choledochojejunostomy for Restoration of Biliary Drainage**—Charles G. Child II and Arthur J. Donovan, Boston.

Illustrates importance of restoration of biliary drainage after injury to the common duct, demonstrating the difficult surgical problem involved. Sound, 30 minutes.

4:27—**Chemothalamectomy for Parkinson's Disease**—Robert W. Rand, Los Angeles.

The film depicts the operative technique for chemothalamectomy. A cinematographic study of the pre- and postoperative status of the Parkinsonian patients is given. Color, 15 minutes.

Scientific Exhibits

Main Arena, Civic Auditorium

Surgical Treatment of Cervical Osteo-Arthritis—Paul H. Crandall, M.D., Robert W. Rand, M.D., William N. Hanafee, M.D. and James Davis, M.D., Los Angeles.—Four major panels depicting (a) neurological manifestations, (b) roentgenographic manifestations, (c) recent advances in surgical treatment (Cloward technique).

Psychotrophic Drugs; Their Use in Pediatrics—Leon Oettinger, Jr., M.D., San Marino.—Three panels: (a) diagram of relation between epilepsy, behavior disorders, mental retardation and cerebral palsy, with electroencephalograms illustrating each group; (b) illustrative examples of Bender-Gestalt Tests, IQ tests emphasizing sub-group spreads, and Goodenough Draw-A-Man tests; (c) examples of before and after therapy.

Alcoholic Brain Disease—A. E. Bennett, M.D., Berkeley; and G. Lawrence Mowery, Berkeley, by invitation.—A study of 227 cases of chronic alcoholism. Electroencephalographic findings in various stages of alcoholism especially the early diagnosis of alcoholic brain disease are shown. Combined electroencephalography, pneumoencephalography and psychodiagnostic testing discloses an intermediate stage of brain pathology between the acute and chronic stages. This stage is reversible but is frequently misdiagnosed as a psychogenic disorder.

Human Extra-Ocular Electromyography — Arthur Jampolsky, M.D., and Edward Tamler, M.D., San Francisco; and Elwin Marg, Ph.D., Berkeley, by invitation.—The exhibit shows relation of ocular electromyography to other electro-physiological techniques, the technique of ocular electromyography and examples of results.

Surgical Removal of Tumors About the Face with Primary Reconstruction—Joel J. Pressman, M.D., Los Angeles; Ralph Byron, M.D., Duarte; and Mildred Burtz Simon, Los Angeles, by invitation.—The exhibit is a series of operative photos in color demonstrating the steps in the removal of various tumors of the face, ears and lips. The material is of unusual photographic excellence and numerous stages of each technique are shown.

Continued Complaints Following Cholecystectomy—C. Allen Wall, M.D., by invitation, and T. J. Whalen, M.D., San Francisco.—Selected for study from 3,642 patients hospitalized with biliary tract disease are 142 patients who continued to have complaints referable to the biliary system. Transparencies with descriptive legends and artist's illustrations depict the normal anatomy and physiology of the biliary tree, the alterations with disease, and the adjustments following operation. The causes of persistent symptomology are cited.

Management of Gastric Ulcer—William H. Bachrach, M.D., Los Angeles—The exhibit shows various possible results of therapeutic tests in gastric ulcer and indications based on these results.

The Pulmonary Coin Lesion—Its Significance—Jack M. Mosely, M.D., Santa Barbara.—Charts showing percentage, various types of coin lesions, mounted x-rays in cabinets, photomicrographs, and photographs of specimens.

Volumetric, Gravimetric and Radio-Isotopic Determination of Fluid Transfer in Transurethral Prostatectomy—Robert J. Prentiss, M.D., San Diego; and Robert H. Taylor, M.D., Oakland, E. S. Maxson, M.D., El Centro and Frank H. Carter, M.D., San Diego, all three by invitation.—This study is concerned with the actual quantities of fluid that can be absorbed through the prostatic veins during the transurethral removal of prostatic obstruction. NaI^{131} was used to tag the irrigating fluid. The actual absorption was determined by weighing the patient, measuring the irrigating fluid volume changes, and direct detection of the radioactivity of the patient by means of a scintillator head placed over the heart, rate count meter, and an Esterline-Angus recorder. Charts, graphs and photographs depict materials, methods and conclusions.

Early (Pre-Leukemic) Stage of Leukemia—Michael A. Rubinstein, M.D., Beverly Hills.—Hematologic and clinical studies in a series of patients during the early (pre-leukemic) phase of leukemia, before the onset of recognizable leukemia; diagnostic importance in obscure syndromes.

Bilateral Primary Bronchogenic Carcinoma—Shirley A. Howard, M.D., Oakland, by invitation.—Seven translite photographs (x-rays and photomicrographs) and illuminated case histories and descriptive material.

Emergency Care of the Eye—Leo L. Mayer, M.D., Jackson, Mississippi, by invitation.—8 x 10 black and white photographs with large legends showing care of patient, medication, instruments and methods including illumination and magnification.

The Outflow Tract of the Lower Extremity in Vascular Disease—Andrew G. Sharf, M.D., and Earle D. Acker, M.D., Glendale.—Demonstration of various types of outflow tract disease of the lower extremity as related to different arterial disease conditions. A correlation of x-ray findings and clinical experience based on varieties of outflow tract obstruction, etiology of obstruction, location of obstruction, patterns of collateral circulation, prognostic values of diagnostic studies such as backflow pressures and plethysmographic data, treatment of various vascular obstructions and results obtained.

WOMAN'S AUXILIARY *to the* CALIFORNIA MEDICAL ASSOCIATION

Twenty-Ninth Annual Convention, February 22 to 24, 1959

Headquarters: Sheraton-Palace Hotel, San Francisco

MRS. NEWELL JONES, President

MRS. THEODORE A. POSKA, President-Elect

Convention Chairman: MRS. J. CLIFFORD LONG

REGISTRATION

South Lobby

Sunday, February 22—9:00 a.m. to 4:00 p.m.
Monday, February 23—8:30 a.m. to 4:00 p.m.
Tuesday, February 24—8:30 a.m. to 11:00 a.m.

SUNDAY, FEBRUARY 22

8:30 a.m.—Executive Committee breakfast meeting, Room 2062.

9:30 a.m.—Annual Report of the Women's Auxiliary by the President, Mrs. Newell Jones, to the California Medical Association, House of Delegates, Concert Room. Auxiliary members and doctors' wives are invited to attend.

10:45 a.m.—Pre-Convention Board Meeting, Room 2014.

6:00 to 7:30 p.m.—Reception honoring Mrs. Francis E. West, wife of the President of the California Medical Association and Mrs. Newell Jones, President of the Woman's Auxiliary to the California Medical Association, Gold Ball Room. All doctors and their wives are cordially invited.

MONDAY, FEBRUARY 23

9:30 a.m.—First Business Session of the 29th Annual Meeting, Rose Room. Mrs. Newell Jones, presiding.

12:30 p.m.—Luncheon, Past State Presidents, Room 2062.

2:15 p.m.—Second Business Session, Rose Room.

TUESDAY, FEBRUARY 24

9:00 a.m.—Third Business Session, Concert Room. Mrs. Newell Jones, Presiding.

12:45 p.m.—Luncheon in honor of Mrs. Newell Jones and Mrs. Theodore A. Poska; Members of the State Advisory Board and Past State Presidents, Rose Room.

3:00 p.m.—Post Convention Board Meeting, Room 2014. Mrs. Theodore A. Poska, presiding.

8:00 p.m.—Dinner and Ball honoring the California Medical Association President, Dr. Francis E. West, Garden Court. Formal dress optional.

House of Delegates Agenda

1959 Annual Session

Concert Room, Sheraton-Palace Hotel

Speaker	James C. Doyle, Beverly Hills
Vice-Speaker	Ivan C. Heron, San Francisco
Secretary	Albert C. Daniels, San Francisco

FIRST MEETING

Sunday, February 22, at 9:30 a.m.

ORDER OF BUSINESS

1. Call to order.
2. Report of Committee on Credentials, and Organization of the House of Delegates.
3. Roll call.
4. Announcement and approval of Reference Committees.
   - (a) Committee on Credentials. (Delegates must register with the Committee.)
   - (b) Reference Committee on the Reports of Officers, the Council, the Commissions, and Standing and Special Committees. (Reference Committee No. 1.)
   - (c) Reference Committee on Finance, to review the reports of the Secretary and the Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year. (Reference Committee No. 2.)
   - (d) Reference Committee on Resolutions and New and Miscellaneous Business. (Reference Committee No. 3.)
   - (e) Reference Committee (No. 3A) on Resolutions and New and Miscellaneous Business.
   - (f) Reference Committee on Amendments to the Constitution and By-Laws. (Reference Committee No. 4.)
   - (g) Reference Committee on C.P.S. Business.
5. Address by President of the Woman's Auxiliary to the C.M.A.—Mrs. Newell Jones, Encino.
6. Address by President Francis E. West—Presentation of 50-Year Awards.
7. Miscellaneous announcements by the Speaker. (Stenographic service to secure copies of resolutions, etc.)
8. Report of the President—Francis E. West.
9. Report of the President-elect—T. Eric Reynolds.
10. Report of the Speaker of the House of Delegates—James C. Doyle.
11. Report of the Vice-Speaker of the House of Delegates—Ivan C. Heron.
12. Report of the Trustees of the California Medical Association—Francis E. West, President.
13. Report of Physicians' Benevolence Fund, Inc.—Francis E. West, President.
14. Report of the Secretary—Albert C. Daniels.
15. Report of the Editor—Dwight L. Wilbur.
16. Report of the Executive Secretary—John Hunton.
17. Report of Legal Counsel—Peart, Baraty and Hassard.
18. Report of the Advisory Committee for Emergency Action.
19. Report of the Council—Donald D. Lum, Chairman.
20. Reports of District Councilors.
21. Report of C.P.S. Board of Trustees—A. A. Morrison, President.
22. Reports of Commissions.
   - (a) Cancer Commission—David A. Wood.
   - (b) Commission on Medical Education—Albert C. Daniels.
     - (1) Committee on Maternal and Child Care—James W. Ravenscroft.
     - (2) Committee on Medical Education and Hospitals—Walter E. MacPherson.
     - (3) Committee on Postgraduate Activities—Edward C. Rosenow, Jr.
   - (c) Commission on Medical Services—Francis J. Cox.
     - (1) Committee on Fees—H. Dean Hoskins.
     - (2) Committee on Government Financed Medical Care—John M. Rumsey.
       - (a) Liaison Committee to State Department of Social Welfare—Donald C. Harrington.
     - (3) Committee on Indigent and Aged—Thomas N. Elmendorf.
     - (4) Committee on Medical Economics—Robert Shelton.
     - (5) Committee on Rehabilitation—Francis M. McKeever.
   - (d) Commission on Professional Welfare—Arthur A. Kirchner.
     - (1) Committee on Health and Accident Insurance—Homer C. Pheasant.
     - (2) Medical Review and Advisory Board—Arthur A. Kirchner.
   - (e) Commission on Public Health and Public Agencies.
     - (1) Division I for Public Agencies—Warren L. Bostick.
       - (*a*) Committee on Mental Health—Stuart Knox.

        - (*b*) Committee on Other Professions—Wayne Pollock.
        - (*c*) Committee on State Medical Services—Warren L. Bostick.
        - (*d*) Committee on Veterans Affairs—Charles B. Hudson.
    - (2) Division II for Community Health Services—James C. MacLaggan.
        - (*a*) Committee on Allied Health Agencies—James C. MacLaggan.
        - (*b*) Committee on Blood Banks—Andrew M. Henderson, Jr.
        - (*c*) Committee on Civil Defense and Disaster—Justin J. Stein.
        - (*d*) Committee on Industrial Health—Jerome W. Shilling.
        - (*e*) Committee on Rural Health—Robb Smith.
        - (*f*) Committee on School Health—Charles L. Branthaver.
- (f) Commission on Public Policy—Dan O. Kilroy.
    - (1) Committee on Legislation—Dan O. Kilroy.
    - (2) Committee on Public Relations—Malcolm S. Watts.
- (g) Judicial Commission—Donald A. Charnock.

23. Reports of Standing Committees.
    - (a) Committee on Finance—Ivan C. Heron.
    - (b) Committee on Scientific Work—Albert C. Daniels.
    - (c) Medical Executives Conference—John Hunton.
24. Reports of Special Committees.
    - (a) Committee on History and Obituaries—J. Marion Read.
    - (b) Constitution Study Committee—Sam J. McClendon.
    - (c) Delegates to the A.M.A.—Donald Cass.
25. Old and unfinished business.
    - (a) Constitutional amendment No. 1.
    - (b) Constitutional amendment No. 2.
    - (c) Constitutional amendment No. 3.
    - (d) Constitutional amendment No. 4.
    - (e) Constitutional amendment No. 5.
    - (f) By-Law amendment No. 1.
26. New Business.

SECOND MEETING

Wednesday, February 25, at 9:30 a.m.

ORDER OF BUSINESS

1. Call to order.
2. Supplemental report of Credentials Committee.
3. Roll call.
4. Secretary's announcement of Council's selection of time and place for the 1959 annual session.
5. Election of officers:
    - (a) President-elect.
    - (b) Speaker.
    - (c) Vice-speaker.
    - (d) Councilors (three-year terms):
        - (1) Second District—Omer W. Wheeler, Riverside (term expiring).
          Second District—Imperial, Inyo, Mono, Orange, Riverside, and San Bernardino counties.
        - (2) Third District—Office No. 1—Malcolm C. Todd, Long Beach (term expiring).
        - (3) Third District—Office No. 4—Arthur A. Kirchner, Los Angeles (term expiring).
          Third District—Los Angeles county.
        - (4) Fourth District—Robert O. Pearman, San Luis Obispo (term expiring).
          Fourth District—San Luis Obispo, Santa Barbara and Ventura counties.
        - (5) Seventh District—Samuel R. Sherman, San Francisco (term expiring).
          Seventh District—San Francisco county.
        - (6) Tenth District—Ralph C. Teall, Sacramento (term expiring).
          Tenth District—Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo, and Yuba counties.
    - (e) Delegates to the American Medical Association:
      Delegates and Alternates to the American Medical Association are elected for terms of two calendar years. The Delegates and Alternates to be elected at this meeting will serve for two calendar years starting January 1, 1960.
      Incumbents:
        - (1) Henry Gibbons, III, San Francisco (term expiring).
        - (2) Sam J. McClendon, San Diego (term expiring).
        - (3) Eugene F. Hoffman, Los Angeles (term expiring).
        - (4) John W. Green, Vallejo (term expiring).
        - (5) L. A. Alesen, Los Angeles (term expiring).
        - (6) Frank A. MacDonald, Sacramento (term expiring).
        - (7) Paul D. Foster, Los Angeles (term expiring).
        - (8) Donald A. Charnock, Los Angeles (term expiring).
    - (f) Alternates to the American Medical Association:
        - (1) Claude P. Callaway, San Francisco (alternate to Henry Gibbons III).
        - (2) John M. Rumsey, San Diego (alternate to Sam J. McClendon).
        - (3) Gerald W. Shaw, Santa Monica (alternate to Eugene F. Hoffman).
        - (4) Warren L. Bostick, Mill Valley (alternate to John W. Green).
        - (5) J. B. Price, Santa Ana (alternate to L. A. Alesen).
        - (6) J. E. Vaughan, Bakersfield (alternate to Frank A. MacDonald).
        - (7) Arthur A. Kirchner, Los Angeles(alternate to Paul D. Foster).
        - (8) Carl M. Hadley, San Bernardino (alternate to Donald A. Charnock).

6. Election of C.P.S. Trustees (three-year terms):

Report of C.M.A. Council as Nominating Committee.

Incumbents:

(a) Bert Halter, San Francisco.
(b) Paul I. Hoagland, Pasadena.
(c) Mr. Guy W. Wadsworth, Jr., Los Angeles.
(d) Leon O. Desimone, Los Angeles (ineligible for re-election).
(e) Merlin L. Newkirk, Downey (ineligible for re-election).

7. Announcement by Secretary.

Council's nominations of members of Commissions and Committees (for approval by the House of Delegates).

8. Reports of Reference Committees:

(a) Reports of Reference Committee No. 1 on Reports of Officers, the Council, Commission and Standing and Special Committees.
(b) Report of Reference Committee No. 2 on Reports of the Secretary, the Executive Secretary, and the budget and dues.
(c) Report of Reference Committee No. 3 on Resolutions and New and Miscellaneous Business.
(d) Report of Reference Committee No. 3A on Resolutions and New and Miscellaneous Business.
(e) Report of Reference Committee No. 4 on Amendments to the Constitution and By-Laws.
(f) Report of Reference Committee on C.P.S. Business.

9. Unfinished Business.

10. New Business.

11. Presentation of Officers:

President.
President-elect.
Speaker.
Vice-speaker

12. Presentation of certificate to retiring president—Francis E. West.

13. Approval of minutes. (Committee to edit.)

14. Adjournment.

James C. Doyle, *Speaker*
Albert C. Daniels, *Secretary*

BY-LAW AMENDMENT OFFERED

One By-Law amendment was offered at the April session of the House of Delegates by Reference Committee No. 4, the committee to consider proposed amendments to the Constitution and By-Laws. Since all proposed amendments to the By-Laws are required to lie on the table for 24 hours before being acted upon, this amendment must await the next regular session of the House of Delegates before it can be voted upon. The proposed amendment to the By-Laws reads as follows:

AMENDMENT TO BY-LAWS

By-Law Amendment No. 1.
Author: J. B. Price.
Representing: Reference Committee No. 4.

Resolved, That Chapter VII, Section 1, of the By-Laws be amended as follows:

First, delete subsection (b) and insert

"(b) *Commission on Public Health,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Rural and Community Health,
2. Committee on School Health,
3. Committee on Mental Health,
4. Committee on Industrial Health.

"(c) *Commission on Public Agencies,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Military Affairs and Civil Defense,
2. Committee on State Medical Services,
3. Committee on Veterans Affairs,
4. Committee on Other Professions,
5. Committee on Blood Banks,
6. Committee on Allied Health Agencies.

Secondly, re-letter the following subsections from (c) to (d) through (l).

Except as herein amended, said Chapter VII. Section 1, shall remain unchanged.

PROPOSED CONSTITUTIONAL AMENDMENTS

Five proposed amendments to the Constitution of the California Medical Association were presented at the 1958 House of Delegates. Under the terms of the Constitution, these proposed amendments must lie on the table for one year, or until the next regular session of the House of Delegates. Meanwhile, they must be published at least twice, in separate issues of the official journal.

All members of the Association, and especially the members of the House of Delegates, will thus have the opportunity to review these proposals during the coming year. They will be presented to the 1959 House of Delegates for vote, on which a two-thirds affirmative vote of those Delegates present and voting is required for passage.

SECRETARY-(TREASURER)

Constitutional Amendment No. 1.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Article VI, Section 1, of the Constitution be amended by deleting the term "-Treasurer" from the present term "Secretary-Treasurer" so that the named officer shall be known as "Secretary."

REPRESENTATION IN HOUSE OF DELEGATES

Constitutional Amendment No. 2.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part A, Section 2, of the Constitution of the California Medical Association be amended by deleting the words shown in parentheses below, so that the section shall read as follows:

Section 2—Representation

As the By-Laws shall provide, each component society shall be entitled to proportionate representation in the House of Delegates (but with a minimum of two delegates).

REPRESENTATION ON THE COUNCIL

Constitutional Amendment No. 3.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part B, Section 9, of the Constitution be amended in subparagraph (a) by deleting the words shown in parentheses below and adding the words shown below in italics, so that subparagraph (a) shall read as follows:

(a) Each Councilor District, as specified in this Constitution, shall be entitled to one Councilor for each 1,000 *active* members, *or major fraction thereof,* according to its membership as of the first day of (November) *September* of the preceding year; provided that each Councilor District shall be entitled to a minimum of one Councilor.

DELEGATES FROM SECTIONS

Constitutional Amendment No. 4.
Author: A. B. Sirbu.
Representing: San Francisco Medical Society.

WHEREAS, The scientific sections constitute an important part of the structure of the C.M.A.; and

WHEREAS, The sections are not represented in the legislative body of the C.M.A., the House of Delegates; and

WHEREAS, The sections of the A.M.A. have for many years been represented in its House of Delegates; and

WHEREAS, Each section of the C.M.A. has much to contribute toward policy making, both in the scientific and the economic phases of medicine; now, therefore, be it

Resolved, That each section of the C.M.A. be entitled to send one delegate with full voting rights to the House of Delegates of the C.M.A.; and be it further

Resolved, That the C.M.A. Constitution be amended to allow for such representation as follows: Article III, Section 1 amended by the addition of (e) Delegates elected by each scientific section as listed in Chapter IV, Section 1-a of the By-Laws.

CONSIDERATION OF CONSTITUTIONAL AMENDMENTS

Constitutional Amendment No. 5
Author: W. S. Lawrence.
Representing: Butte-Glenn Medical Society.

WHEREAS, Any amendment to the Constitution should be for the greatest good of the Association; and

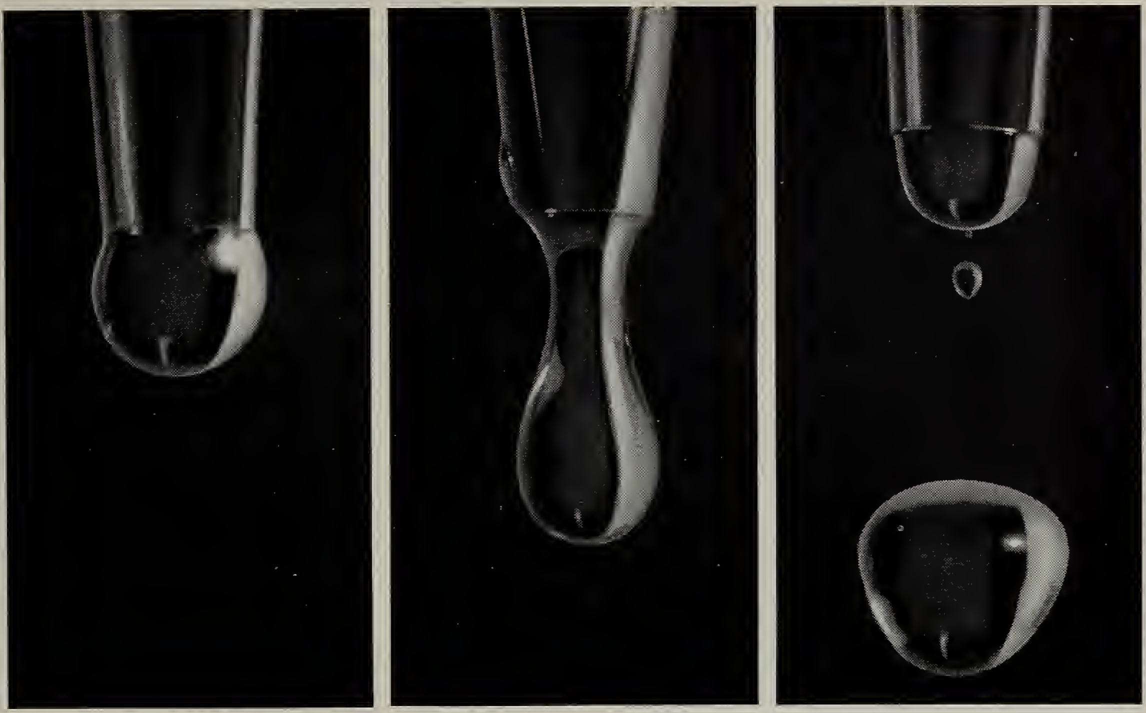
WHEREAS, The most recent amendment to the Constitution which eliminates the Councilors-at-Large was passed without prior hearings in the appropriate reference committee during any regular session of the Association; and

WHEREAS, This action has denied interested delegates the opportunity to meet, exchange views, discuss the ramifications and evaluate the appropriateness of the Amendment to meet its purpose; and

WHEREAS, The proponents of the amendment would be the last to feel the necessity to press such an action through the House of Delegates without adequate consideration; now, therefore, without prejudice to the previous amendment, be it

Resolved: That Article VIII, Section 3, Paragraph 2 of the Constitution be amended by addition of the following:

"Further, such proposed amendment or amendments shall be referred to the appropriate Reference Committee who shall hold hearings on the proposed amendment or amendments during the course of its regular business while the Association is in convention. If the proposal or proposals are introduced during the first session of the House, hearings shall be held at both the current and the next regular meeting. If the proposal or proposals are introduced during the second session, hearings shall be held at the next meeting, and in either event, prior to submission to the House of Delegates for vote.



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Zanchol (brand of florantyrone), a distinct chemical entity unrelated to the bile salts, provides the medical profession with a new and potent hydrocholeretic for treating disorders of the biliary tract.

The high degree of therapeutic activity of this new compound and its negligible side reactions yield distinct clinical advantages.

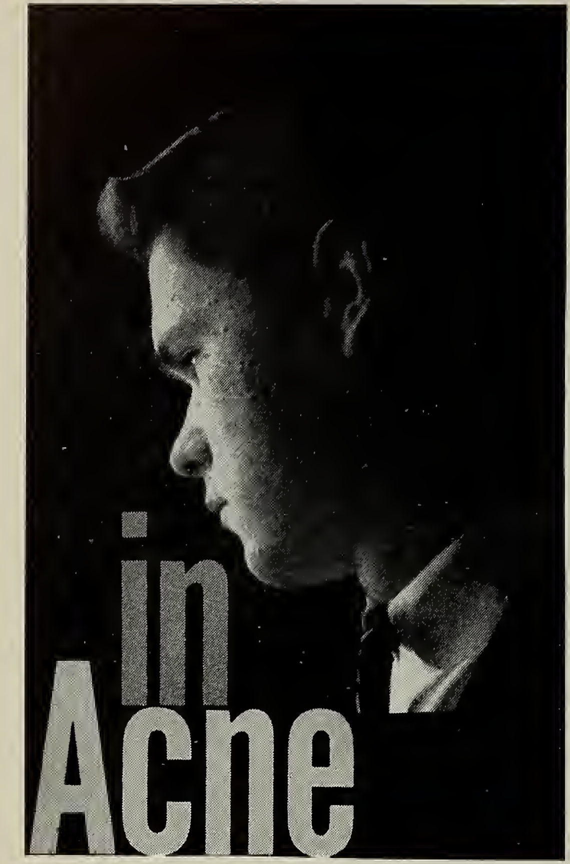
- Zanchol produces a bile low in sediment.
- Zanchol enhances the abstergent quality of bile.
- Zanchol produces a deep, brilliant green bile, regardless of its original color, suggesting improved hepatic function.
- Zanchol improves the flow and quantity of bile without increasing total bile solids.

Bile with these qualities minimizes biliary stasis, reduces sediment and debris in the bile ducts and discourages the ascent of infection.

For these reasons ZANCHOL has shown itself to be a highly valuable agent in chronic cholecystitis, cholangitis and care of patients following cholecystectomy.

Administration: One tablet three or four times a day. Zanchol is supplied in tablets of 250 mg. each. G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

SEARLE



"No patient failed to improve."[1]

pHisoHex washing added to standard treatment in acne produced results that "... far excelled ... results with the many measures usually advocated."[1]

pHisoHex maintains normal skin pH, cleans and degerms better than soap. In acne, it removes oil and virtually all skin bacteria *without scrubbing.*

For best results—four to six washings a day with pHisoHex will keep the acne area "surgically" clean.

1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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American Medical Association Unveils New Aging Program

A promise of more useful and productive lives for the aging population has been made by the American Medical Association's Committee on Aging.

This assurance was given to a medical society planning conference in Chicago as part of a twofold program of individual and community action to achieve these ends. In summarizing three years of concentrated activity in the field of aging, the committee placed great stress on individual action. "The major scourges of aging man are largely the result of faulty diet, flabby bodies from poor hygiene, excessive fatigue, and aimless living."

A plan for "positive health" was suggested by Dr. Edward L. Bortz, Philadelphia, a member of the A.M.A. committee, who cited the 10 basic needs for older persons:

—A balanced diet including more protein, vitamins, and fluids; less fats and calories.

—Regular elimination of waste products.

—Adequate rest of both mind and body.

—Pursuit of interesting and specific recreational activities.

—A sense of humor, which is the best antidote for tension.

—Avoidance of excessive emotional tension which leads to personal ineffectiveness.

—Mutual loyalty of friends and family.

—Pride in a job.

—Participation in community affairs.

—Continued expansion of knowledge, wisdom, and experience, which add to maturity.

Dr. Bortz termed these 10 points a "do-it-yourself" program which should allow the average healthy man and woman to live 100 years with much less suffering and deterioration than is now occurring. He said the two major elements in prolonging life are the preservation of energy and a high degree of motivation. The first is maintained through proper diet, exercise, and rest, while the second comes from purposeful, useful activity. "Useful activity provides high and specific motivation—a justification for living these added years. When the incentive, the zest for living, is lost, senility is inevitable."

His thoughts were echoed by Dr. Theodore G. Klumpp, president, Winthrop Laboratories, New York, who said, "Based on loss of motivation and interest and to a large extent because of the fear psychosis against exercise and exertion, our middle aged and older people reduce their physical activities with damaging if not disastrous results. "I believe that we must do everything we can, as we grow older, to resist the inclination to slow down the

(Continued on Page 73)

Low Dosage KYNEX* for G.U. Infections

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Unusual Antibacterial and Anti-infective Properties—More soluble in acid urine[1] . . . higher and better sustained plasma levels than any other known and useful antibacterial sulfonamide.[2]

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Dosage: The recommended adult dose is 1 Gm. (2 tablets) the first day, followed by 0.5 Gm. (1 tablet) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours.

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references:
1. Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958.
2. Editorial: *New England J. Med.* 258:48-49, 1958.

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*Reg. U. S. Pat. Off.

35,000 Physicians Take Graduate Training

(Continued from Front Advertising Section, Page 50)

New York, Colorado, Connecticut, Iowa, and New Jersey.

—The average monthly cash stipend paid to interns continued to rise. Hospitals affiliated with teaching institutions raised their stipends from an average of $141 in 1956-57 to $155 in 1957-58. Nonaffiliated hospitals raised theirs from an average of $177 to $197.

—Residency training was offered in 26 specialties and in general practice. Residencies in contagious diseases and malignant disease have been discontinued.

—Approximately one-third of all residencies were offered in surgery, internal medicine, and obstetrics-gynecology. Residencies in aviation medicine, dermatology, obstetrics-gynecology, ophthalmology, and surgery showed an occupancy rate of 90 per cent or higher.

In the United States, 1,532 communities are receiving fluoridated water. The population served is 32,319,603.—*A.D.A. Newsletter, Oct. 1, 1957.*

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  American Board Review Course, Two Weeks, April 6
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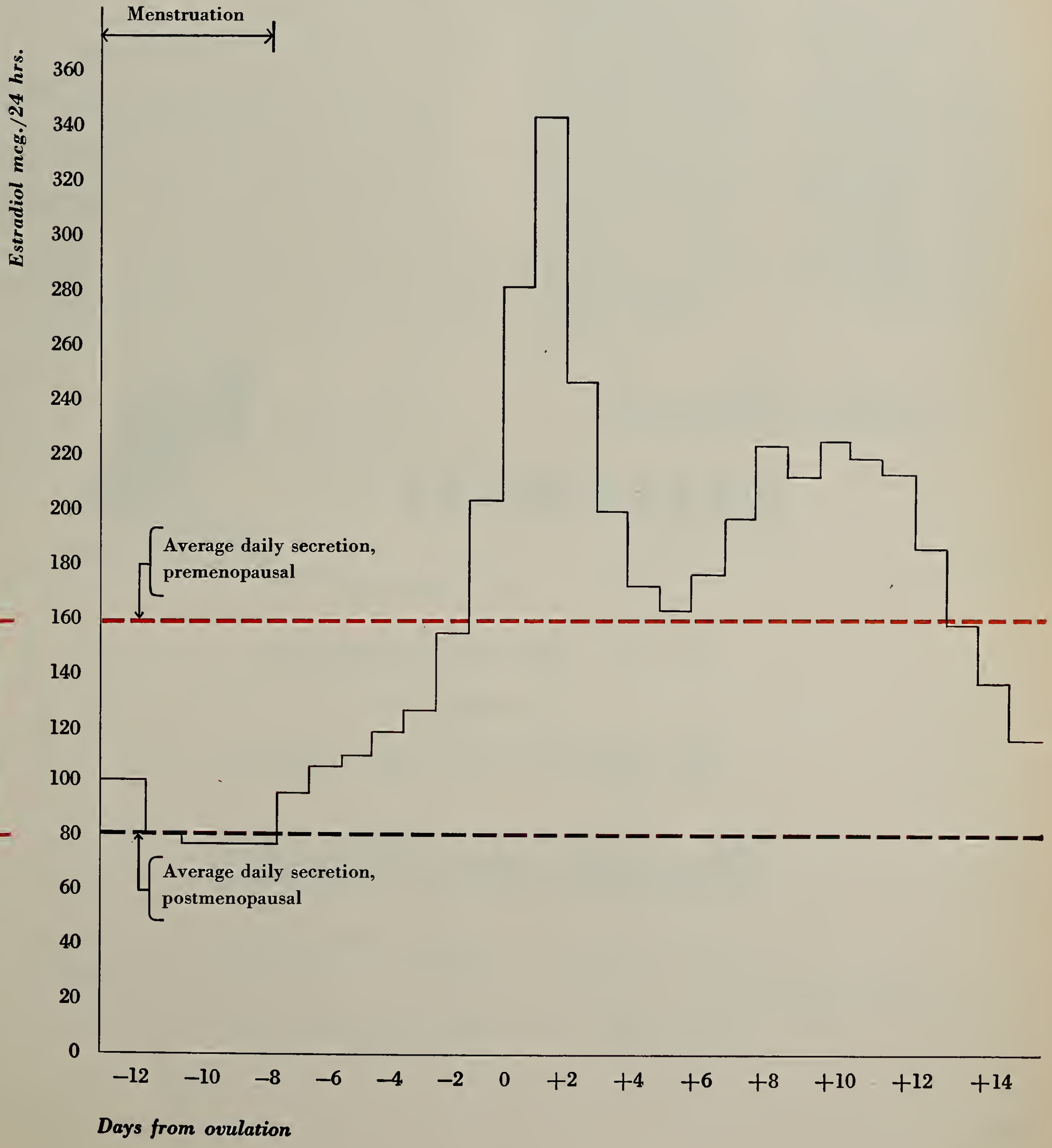

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Jobs May Benefit Heart Patients

Suitable work may be more beneficial than rest and retirement for persons with severe heart disease, according to a Brooklyn, New York, physician.

Dr. Alvin Slipyan studied 19 persons who would normally be considered to be unemployable but who were successfully working in industrial and clerical jobs. The physical condition of some of them actually improved after they started working. Most industries refuse to hire cardiac patients because of the fear of absenteeism and compensation claims. Among these 19 persons, the low absenteeism rate was remarkable, Dr. Slipyan said, and there were no compensation claims.

On the basis of his study, he suggested a possible change in the rule that persons with severe heart disease require constant rest and retirement from work.

Included in the study, reported in the September 13 issue of the *Journal of the American Medical Association*, were 10 persons who had had heart attacks (three with two attacks), seven with rheumatic heart disease, and two with hypertensive heart disease. They were employed by Abilities, Inc., an Albertson, Long Island, New York, company employing only disabled persons.

Among the patients with postmyocardial infarc-

(Continued on Page 73)

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"Exclusively for the treatment of Alcoholism"

American Medical Association Unveils New Aging Program

(Continued from Page 62)

tempo of our living. I am convinced that if you will just sit and wait for death to come along, you will not have long to wait."

The role of the community in helping the aging was outlined by Dr. Frederick C. Swartz, Lansing, Michigan, committee chairman, in a six-part program. Designed to supplement individual health plans, the program calls for:

—Stimulation of a realistic attitude toward aging by all people.

—Extension of effective methods of financing health care for the aged.

—Expansion of skilled-personnel training programs and improvement of medical and related facilities for older people.

—Promotion of health maintenance programs and wider use of restorative and rehabilitative services.

—Amplification of medical and socio-economic research in problems of aging.

—Cooperation in community programs for senior citizens.

Dr. Swartz said, "It is the duty and responsibility of the state and county medical societies to study the situation of the aging population in their own states. The panorama is rapidly changing and, if the state and national committees on aging work hand in hand, we may find an answer for many situations before they become problems."

The American Medical Association hopes these programs will provide a foundation upon which a "new world of aging," reaffirming the worth and responsibilities of individual and family, can be built.

Jobs May Benefit Heart Patients

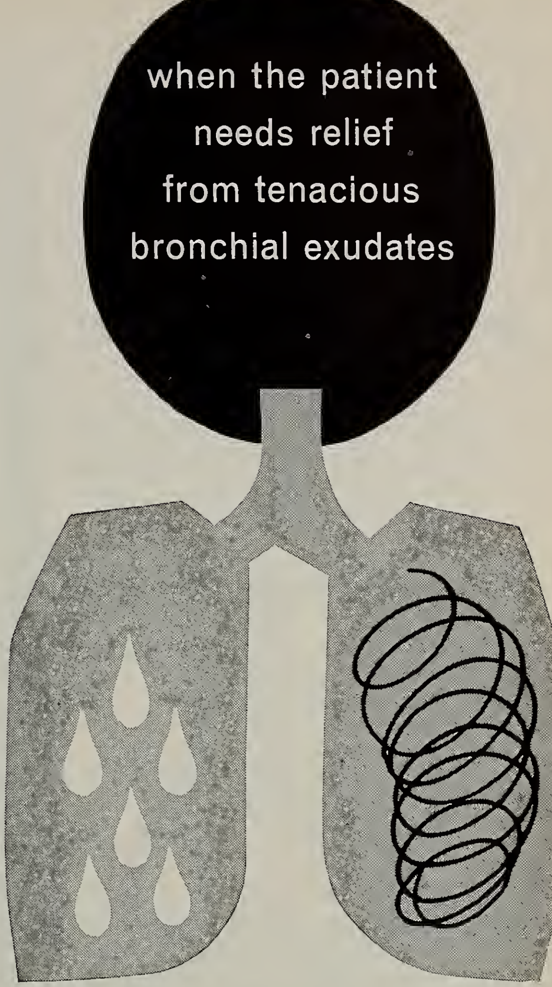
(Continued from Page 68)

tion, the age spread was from 26 to 63, with eight over the age of 50. Their jobs included office and plant bench work. The jobs all required the effort of walking, but none heavy labor. Some of these people had been unemployed for as long as four and a half years before taking jobs at Abilities, Inc.

Travel time—a factor that can influence the success or failure in a job—ranged from 15 to 45 minutes a day and the distance from 5 to 30 miles. Seven drove their own cars.

Of these patients, five showed no change in physical condition after employment, three showed definite improvement, and one had increased attacks of pain but showed no increase in disability. One man died of a cerebral embolism, apparently related

(Continued on Page 74)



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Jobs May Benefit Heart Patients

(Continued from Page 73)

to an experience in which he was trapped in his car for more than an hour in a snowstorm.

Among the rheumatic heart disease group, five showed no change in their condition after starting work and two improved. Their jobs included office work as a messenger, plant inspector, bench work, and packaging. One of the hypertensive heart disease employees showed no change in status and one gradually improved.

Dr. Slipyan noted that his report "may be considered unique in that never in the history of private industry has such a deliberate policy of employing the 'unemployable' cardiac patient been seen." The financial success of this enterprise is shown by the productivity of these employees.

Eye Protection Discussed by American Medical Association Committee

Suspicions that fluorescent lighting may be injurious to the eyes are unfounded.

"Fluorescent lighting is not harmful to the eyes. It does not cause visual discomfort if properly installed, maintained, and used," the American Medical Association Committee on Industrial Ophthalmology of the Council on Industrial Health said.

The committee's findings are part of three special reports on eye protection in industrial plants which appear in the September 6 issue of the *Journal of the American Medical Association.*

The study also revealed that:

—Ultraviolet energy from clear blue summer sky light is several times as great per foot-candle as fluorescent light.

—Light from some fluorescent lamps resembles daylight more closely than that from tungsten-filament lamps.

—Heat is the only known physiological effect produced from infrared energy found in present-day fluorescent lighting.

—Glare may occur in any lighting system and can be solved by proper installation and use.

—Noticeable flicker is usually eliminated in modern multiple tube fluorescent installations.

The committee recommends the use of guides set forth by the American Standards Association and the Illuminating Engineering Society to achieve the desired level of illumination.

In a second report to the council dealing with chemical eye injuries, the committee said, "Water is still the most universally available effective, and practical emergency first-aid treatment of eyes injured by chemicals."

"Published reports of research in the use of buffered neutralizing solutions," the committee said,

(Continued on Page 78)

World-Wide Hunt for Radium Dial Workers Launched

A world-wide search has been launched to find at least 2,000 persons who survived radium poisoning during the 1920s. These include persons who ingested radium during their work as luminous watch dial painters or during medical treatment. Between 1915 and 1930 radium was an accepted medical treatment for a number of disorders. Contrary to popular belief, many of these people are still alive, probably in good health. If they can be found—and studied—some questions about the puzzling effects of radioactive deposits in the body may be answered. After all, they have carried radioactive material in their bodies for 30 years—a full generation.

American physicians were asked to help find these individuals, many of whom have probably forgotten—or never knew—that they were once exposed to radium.

Writing in the October 11 issue of the *Journal of the American Medical Association,* Dr. Samuel D. Clark, Cambridge, Massachusetts, asked physicians, nurses, and medical records departments to report any persons who suffered radium poisoning to a newly organized central catalog agency.

The catalog is being set up at the Radioactivity Center of the Massachusetts Institute of Technology, Cambridge.

Cooperating in the project is the Division of Biology and Medicine of the Atomic Energy Commission.

Dr. Clark noted that most medical records of these persons have been destroyed through accident or inadvertance. By collecting information about them in a central place, there will be available for study such data as the amount of internally deposited radioactivity, shortening of life span, susceptibility to disease, and the incidence of bone changes and tumors.

The information may help define "more precisely the safe levels of radioelements in the body," an accompanying *Journal* editorial said.

It urged all physicians to cooperate in the study, adding that this cooperation "can help write the close of one of the most dramatic chapters in the history of medicine." With the use of x-rays and radioactive isotopes, "radium seems to be nearing the end of its period of usefulness in therapy."

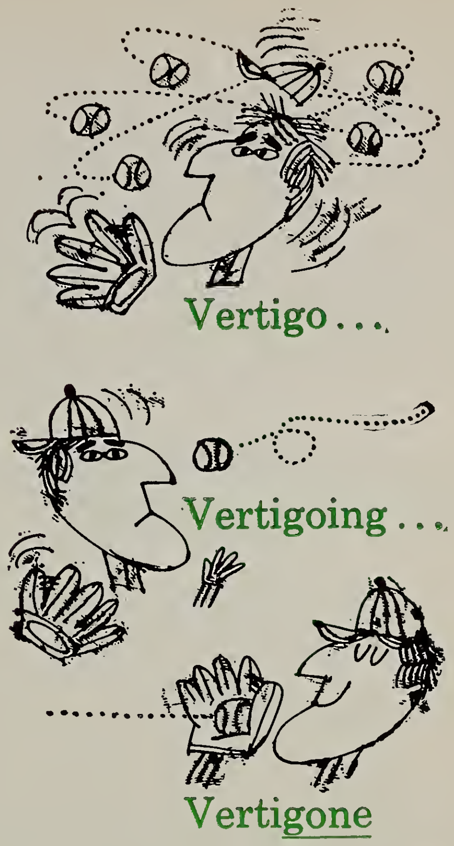
The Radioactivity Center wants information about three types of persons, Dr. Clark said. They are:

—Those who ingested radium compounds of any sort either during their work (as watch dial painters) or during medical treatment.

—Those who received injections of radium compounds for such conditions as arthritis, hypertension, or gout.

—Those who suffered exposure in the process of radium research or the manufacture of radium products.

(Continued on Page 86)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Eye Protection Discussed by American Medical Association Committee

(Continued from Page 74)

"have failed to show superiority of buffer instillation over proper water irrigation."

Immediate and thorough flushing of chemicals from the eyes has brought about a tremendous saving of eyesight among industrial employees.

In a discussion of eye safety equipment, the committee stated that "eye disease is not caused by lenses in eye safety equipment.

"Substandard or improperly fitted lenses may cause annoyance and discomfort, but not disease."

Safety goggles should meet the specifications of the National Bureau of Standards, they said.

"The examination, fitting, and maintenance of eye protective wear should be under the supervision of an eye physician," the committee concluded.

Dr. Edmund B. Spaeth, Philadelphia, is chairman of the committee.

C.M.A. ANNUAL SESSION
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Maternal Deaths Halved In 11-Year Period

The proportion of women dying in childbirth has been reduced by more than half since 1946, according to two New York physicians. The past few years have been a period of "phenomenal growth and accomplishments unmatched in the history of obstetrics," they said in the September 20 issue of the *Journal of the American Medical Association.*

According to the United States National Office of Vital Statistics, the number of deaths per 10,000 live births has decreased from 11.6 in 1946 to 4 in 1956.

In Bronx County the number has dropped from 16.3 to 7.2. The figures for Bronx County are about 25 per cent higher than those for the United States, the physicians said, because the Bronx study included all deaths of women within 90 days of delivery regardless of the cause.

The five major causes of maternal deaths in Bronx County were infection, anesthesia, toxemia, hemorrhage, and heart disease. According to cause of death, the percentage of decrease in maternal mortality between the first and second halves of the 11-year study period were: Infection, 80 per cent; anesthesia, 65 per cent; toxemia, 45 per cent; hemorrhage, 24 per cent; and heart disease, 21 per cent. Although infection accounted for only 10.2 per cent of all maternal deaths, it showed the greatest reduction as a cause of maternal death.

"Were it not for the large number of deaths due to criminal abortion, which often does not respond to the antibiotics, infection would be eliminated as a leading cause of maternal death," they said.

As an adjunct to antibiotics, blood transfusions have also helped reduce the number of deaths from infection, since infection often follows inadequately treated hemorrhage. New blood pressure-lowering drugs and diuretics help control toxemia, a condition in which there is a general "poisoning" of the system. New developments in anesthesia and the increasing number of qualified persons to administer it have made anesthesia safer and reduced complications.

The most frequent cause of maternal death was hemorrhage, accounting for 19 per cent. The decrease in deaths was primarily due to the more liberal use of blood transfusions.

Other factors contributing to the decrease include education of the public concerning the importance of early prenatal care and good medical care, improved hospital facilities, and more rigid hospital rules and regulations pertaining to obstetrical practice.

The authors are Dr. Milton D. Klein and Dr. Jacob Clahr, members of the Bronx County Medical Society's committee for maternal welfare.

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World-Wide Hunt for Radium Dial Workers Launched

(Continued from Page 77)

There are several conditions that should make a physician suspicious of radium poisoning, he said. They are: spontaneous fractures without evidence of cancer at the site of fracture; osteogenic sarcomas, a type of bone tumor, and cancers of the sinuses. He added that many watch dial painters had unusual trouble with their teeth, losing them at an early age and having long convalescences after extraction.

Dr. Clark of the department of medicine at M.I.T. is handling the medical supervision of the project, which is headed by Prof. Robley D. Evans. Collaborating in the study are researchers at the Argonne National Laboratory and Cancer Research Hospital, Lemont, Illinois; the New Jersey State Department of Health, and the Royal Cancer Hospital, London, England.

Inert dusts effective in controlling termites have been found by entomologists.—*U. C. Clip Sheet, January 7, 1958.*

Note

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Dangers of Drinking "Scrap-Iron"

Use of "scrap iron," a new bootleg drink composed mainly of rubbing alcohol and mothballs, produces bizarre and serious mental effects, three South Carolina scientists have stated.

Fifty cases of severe intoxication from the drink in a three-month period were reported in the November 1 issue of the *Journal of the American Medical Association.*

Composed of yeast, cracked corn or corn meal, sugar, isopropyl alcohol, and mothballs, the concoction is made in galvanized drums which apparently give it a metallic taste; hence the name "scrap iron." Clorox, a commercial cleaning preparation, is frequently used as a catalyst.

About the addition of mothballs to the mixture, the authors said, "The only scientific reason elicited for this addition was the statement of those patients consciously aware that its addition added some 'kick to the drink'."

"Obviously this is a drink of 'voltage rather than vintage,'" they said, urging that steps be taken to hinder the sale of this "toxic substance."

A majority of the patients exhibited definite symptoms of an acute or chronic mental disturbance "out of proportion to the quantity of alcohol consumed."

"Few patients were able to ingest more than one-half pint of 'scrap iron' in six to eight hours and remain conscious. Only chronic alcoholics could drink as much as one pint and remain conscious." This bears out animal studies which showed isopropyl alcohol to be twice as toxic in all respects as ethyl alcohol.

Of the patients, 26 showed symptoms identical to those of delirium tremens from ethyl alcohol. These included restlessness, hallucinations, illusions, extreme apprehension, tremor, and general disorientation. These acute symptoms are usually reversible on abstinence from alcohol.

Five patients had brain symptoms which were chronic, while four had major psychiatric disturbances. Nine were diagnosed as having acute alcoholism and three as being in hypoglycemic shock, which results from an abnormally low blood sugar level. Three others had serious gastrointestinal disturbances.

Many of the patients showed other serious medical problems, including anemia, hypertension, heart trouble, epilepsy, diabetes, and pneumonia.

Most of the symptoms of "toxic psychosis" subsided within several days simply with the use of fluids, vitamins, and sedation or tranquilizers, the authors said.

In conclusion they warned that the consumption of "scrap iron" could become more prevalent because of its cheapness (isopropyl alcohol recently

(Continued on Page 92)

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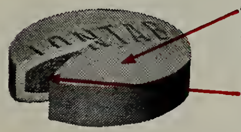

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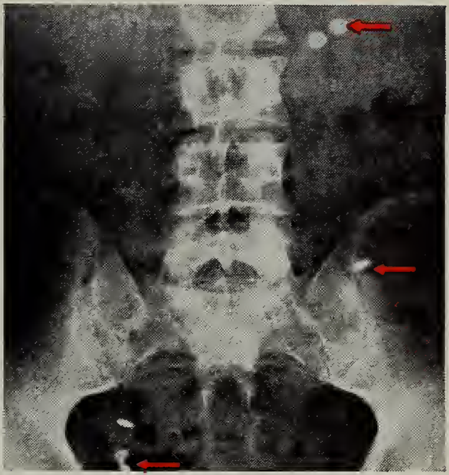
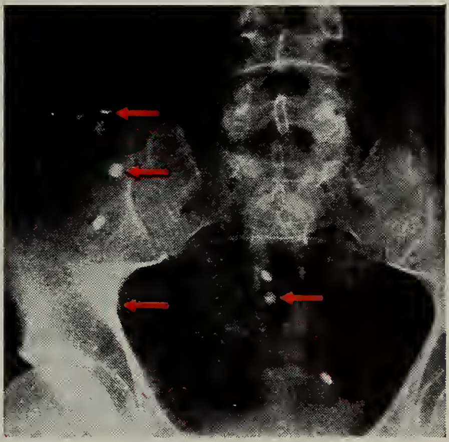
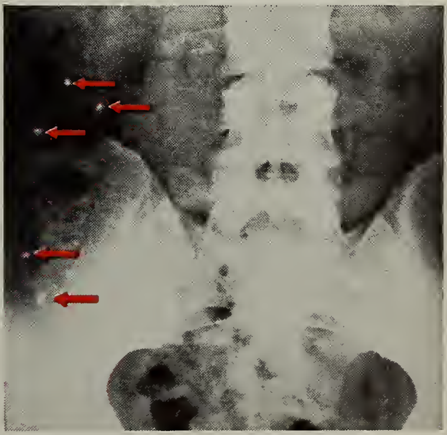


4 hours Lontabs are in the ileum and cecum as core has steadily eroded.



8 hours Lontabs are still visible as substance of core continues to be released.



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(Continued from Page 82)

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Dangers of Drinking "Scrap-Iron"

(Continued from Page 89)

was sold for nine cents a pint) and that its prolonged use would produce effects similar to those of ethyl alcohol "but of a more severe degree in a shorter period of time."

The authors are Richard H. Gadsden, Ph.D., assistant professor of chemistry, and Drs. R. Ramsey Mellette and William C. Miller, Jr., assistant psychiatric residents, Medical College of South Carolina, Charleston.

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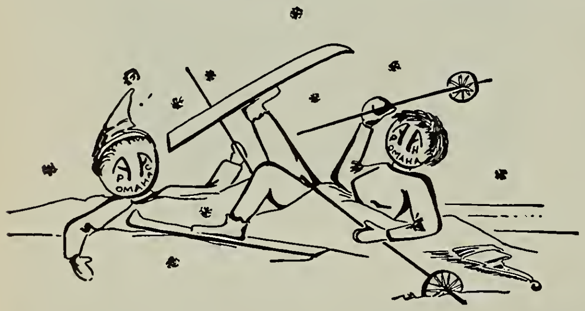

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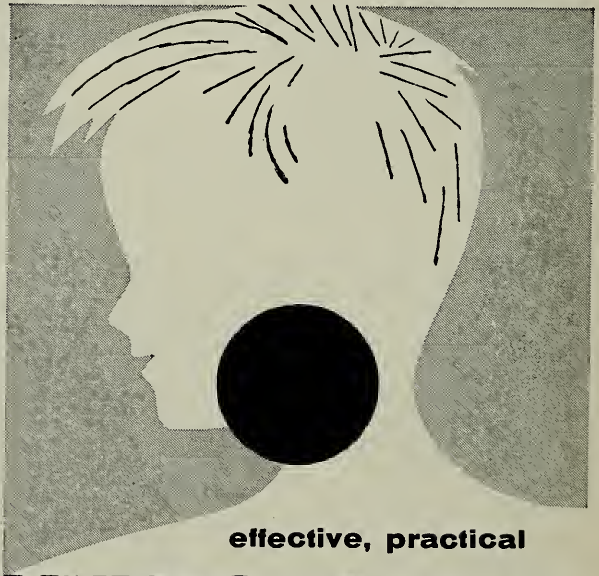

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